

The Meaning and Use of Proper Names

A dissertation
submitted in fulfilment of
the requirements for
the degree
of

Doctor of Philosophy
in
Philosophy

by

Nicole M. Wyatt

University of Canterbury
2000

BC
199
.N3
.W976
2000

TABLE OF CONTENTS

Abstract.....iv

Acknowledgements v

Preface 1

 Précis of the chapters..... 3

Chapter 1: Recent history 6

 1.1 Content 8

 1.2 Frege and Russell..... 16

 1.3 The critique of descriptivism..... 27

Chapter 2: The contemporary views..... 35

 2.1 Descriptivism reborn 36

 2.2 The naïve theory 47

 2.3 Neo-Fregeanism..... 51

 2.4 The hidden-indexical theory 53

 2.5 Neo-Fregean HIT..... 56

 2.6 The indexical theory of names..... 57

 2.7 The common ground of contemporary semantics of names..... 66

Chapter 3: The counterexamples 67

 3.1 Attitude trouble for everybody 68

 3.2 Dressing like Superman..... 82

 3.3 Defending the simple sentence counterexamples..... 98

 3.4 Scorekeeping 103

Chapter 4: Game-theoretic semantics and the new theory of reference 105

 4.1 Is the new theory of reference based on a fallacy?..... 106

 4.2 Independence friendly logics..... 117

 4.3 Game-theoretic semantics..... 120

 4.4. Natural languages, GTS, and names..... 128

 4.5 So, is the NTR based on a fallacy?..... 142

4.6 Conclusion	148
Chapter 5: Neo-medieval semantics	150
5.1 Signification and supposition	151
5.2 Ampliation and Appellation	159
5.3 Buridan on intentional contexts	166
5.4 Reference and Quantification	176
Chapter 6: Semantics, pragmatics and intuitions	178
6.1 The naïve theory	178
6.2 What is said versus what is implied.	182
6.3 Recognizing implicatures	190
6.4 The pragmatics/semantics distinction.....	204
Chapter 7: The new no-theory theory	206
7.1 What do the simple sentences show?	208
7.2 The semantic content of names	212
7.3 Compositionality	230
7.4 Central uses and speaker-meaning	244
7.5 Things we do with names	248
7.6 Real life, hard cases and philosophical semantics	251
Concluding remarks.....	253
References	257
Complete analytic table of contents.....	266

ABSTRACT

The contemporary accounts of the semantic content of proper names fall into two broad categories—Millian views which maintain that the semantic content of a proper name is always its referent, and neo-Fregean views that maintain that in propositional attitude contexts the referent of a name is a sense or mode of presentation of its usual referent. I argue that neither of these two general pictures is correct and that proper names and other singular terms cannot be assigned a uniform semantic content. That is, proper names do not make exactly the same semantic contribution whenever they occur, and the contributions they do make cannot be captured by a general (and not merely disjunctive) function from context to content.

I argue that the semantic contribution of proper names is highly context sensitive and that none of the contemporary accounts of proper names account for all their uses. I discuss a number of puzzling simple sentences due to Jennifer Saul and argue against the view our intuitions about the puzzle sentences can be explained in terms of the pragmatic implicatures of the utterances. Furthermore, careful attention to the puzzles shows in some cases the content contributed by the proper name cannot be specified by independent means. The propositions expressed by means of such uses of names are such that the circumstances in which they are true do not have anything in common other than the fact that they are circumstances in which those propositions are true. These circumstances are instead tied together by overlapping relations of similarity. I suggest that the actual linguistic function of proper names is to make the practice of using a name salient, and that this practice then serves as input for a pragmatic process which takes account of extra-linguistic knowledge and other features of the context.

ACKNOWLEDGEMENTS

My thanks go first and foremost to Brian Wilson, who has been the *sine qua non* of my doctoral studies. Without his support, encouragement, and willingness to move half way around the world I would not have written this dissertation.

My supervisors Jack Copeland and Philip Catton deserve considerable credit for providing encouragement and many useful and interesting conversations while allowing me to pursue my own philosophical interests. Many of the virtues of what follows stem from helpful suggestions and challenging questions from them and audiences at both the University of Canterbury and the Australian National University.

Many of my friends and family have also deserve thanks. Beverly and David Wilson and Stephen and Elaine Wyatt have all provided both financial and emotional support over the last three years. Charleen and Derek Wilson and Amy Wyatt have been valuable cheerleaders and helped to remind me of life before the Ph.D.

Carolyn Mason and Stephen Sharp have been congenial office mates and good friends. I have enjoyed our frequent political and philosophical discussions. Alex Wynne has played an important role in providing two of the prerequisites for good philosophy—coffee and gossip.

All of the staff of the Canterbury Philosophy Department have been encouraging and supportive, but special thanks must go to Derek Browne and Carol Hiller, who went above and beyond the call of duty in ensuring that Brian and I were comfortable upon our arrival and during our three years in Christchurch.

This work has been made possible by financial support from a Social Sciences and Humanities Research Council of Canada Doctoral Fellowship, a University of Canterbury Doctoral Scholarship, and an Alberta Heritage Fund Sir James Lougheed Scholarship.

January 19, 2000
Christchurch, New Zealand.

PREFACE

The new no-theory theory

Traditional approaches to proper names aim to provide an account of the contribution made by names to the semantic content of the utterances in which they occur. The view defended in this dissertation is a simple one—no theory of the semantic content of proper names and other singular terms can be given if such a theory is required to state the uniform semantic contribution that a proper name makes to the compound expressions in which it occurs. The semantic contribution made by proper names and other singular terms is not uniform.

An expression can make a uniform semantic contribution to the sentences in which it occurs in one of two ways. One possibility is that it makes exactly the same contribution in each case. The view that the semantic properties of proper names are exhausted by their referents treats names as being of this type, since the contribution the name makes to each utterance in which it occurs will be the referent. The second possibility is that the expression is context-sensitive but there is a general rule which specifies its semantic contribution in each case. The semantic contribution of an expression of this sort differs from use to use, but its contribution is uniform in that there is a general (and not merely disjunctive) function from context to content. The account of the pronoun 'I' on which its semantic content on any occasion is the object picked out by the description 'the speaker', is a rule of this type.

In what follows I argue that the semantic contribution of proper names (and also other singular terms) cannot be specified in either of these two ways. The problem with the first option is that the semantic content of names is context-sensitive. For example, if a political affairs reporter utters (1) during a newscast then what he has said—the semantic content of (1)—is the same as that of (2).

- (1) The constitution of the U.S. gives Clinton the right to appoint supreme court justices.
- (2) The constitution of the U.S. gives the president the right to appoint supreme court justices.

It is natural to regard the semantic content of 'Clinton' in this context as being that of the description 'the president'.

This phenomena might suggest that proper names fall into the class of expressions which are context sensitive but nevertheless uniform in the sense outlined above. The problem for this approach is that it cannot accommodate either the diversity of semantic contributions made by names or the nature of some of those contributions. In particular, it cannot accommodate the contribution of proper names in sentences like (3) and (4) (where the Superman fiction is taken as fact).

(3) Superman is more successful with women than Clark Kent.

(4) Clark kissed Lois before Superman did.

The difficulty, I will argue, is that the circumstances in which, for example, (4) is true do not have anything in common above and beyond the fact that they are circumstances in which (4) is true. These circumstances are instead tied together by overlapping relations of similarity.

One common philosophical response to the phenomena discussed in this dissertation is that they fall into the domain of pragmatics rather than semantics. According to this view our intuitions about sentences like (1), (3) and (4) are intuitions about their assertibility or about the conversational implicatures of the utterances. Part of the view I defend in what follows is that this position cannot be maintained. The first problem is that our intuitions about sentences like (3) and (4) turn out to stand or fall with our intuitions about the traditional propositional attitude sentences like (5).

(5) Lois believes that Clark cannot fly.

This means that any semantic theory which takes opacity and other puzzles related to the propositional attitudes seriously must address the issues raised by sentences like (1)-(4). Thus the only theory which can consistently dismiss these examples is one which—like the naïve view defended by Scott Soames and Nathan Salmon—claims that our intuitions about utterances like (5) also concern assertibility and conversational implicatures rather than truth-conditions. This view, however, can not be maintained because there is no account of the relationship between what is said by an utterance and what is merely implied by an utterance that will also support the view that we mistake our intuitions about the truth of implications for intuitions about the truth of the utterance itself.

Ever since Frege philosophers of language have pursued an account of the semantics of natural language modeled on an axiomatic system. The task has been seen as one of specifying the right principles and the right basic assignments of content to the primitive expressions. One consequence of acknowledging that some of those primitive expressions—names and singular terms—cannot be assigned a uniform semantic contribution and in some cases cannot be assigned what we would normally think of as a semantic value at all, is that this project will have to be reexamined. However the adoption of the no-theory account of

proper names advocated here should not be seen as a defeatist approach. The inability to axiomatize the theory of meaning should not be seen as an inability to say anything about meaning at all.

Précis of the chapters

In chapter one I discuss the contemporary history of the semantics of proper names. I briefly rehearse the arguments in favour of the view that what is expressed by a sentence—its meaning or information content—is a structured proposition. I note that commitment to such propositions requires an account of how propositions are correlated with the sentences that express them. The natural and compelling approach is to maintain that there is a systematic correlation between the elements of a sentence (the individual words, their order, and the context) and the parts of the proposition that it expresses. However, once we give this answer we are committed to giving an account of what part of a proposition is correlated with each part of a sentence—that is, to identifying the information content of each kind of word. I examine the accounts of the information content of proper names offered by Frege and Russell and then discuss Kripke's critique of their shared descriptivism.

In chapter two I consider a number of possible defenses of descriptivism and argue that whatever the virtues of wide-scope or rigidified descriptivism as an account of how the references of proper names are fixed, neither can provide an account of the information content of those names. I then introduce the main contemporary accounts of proper names and their behaviour in opaque contexts. The naïve theory maintains that the information content of names is exhausted by their referents and that substitution in the so-called opaque contexts actually preserves both truth and meaning. Neo-Fregeanism maintains that the information content of a name is a *de re* sense. The hidden-indexical account maintains that the information content of a name is its referent but that in the opaque contexts the name plays a pragmatic role in specifying certain unarticulated constituents the proposition expressed. The neo-Fregean hidden-indexical theory claims that the information content of a name is its referent but that in the opaque contexts the name also serves as a name of the *de re* sense by which the referent is grasped. The indexical theory of names claims that names do have a linguistic meaning but that their information content is just their referent and that in propositional attitude contexts pragmatic processes guide us in moving from the content of the that-clause to the content of the belief, which must include a *de re* sense of the referent.

Chapter three introduces a number of relatively recent puzzles about the use of proper names. The first of these puzzles concerns the familiar problem of the use of names inside attitude ascriptions. In this case however the problem is not to explain the failure of substitution but the truth-conditions of the utterance. The second group of puzzles involve so-called simple sentences—sentences in which no intensional operators of any sort appear. I argue that none of the proposed treatments of the simple sentences work. The main difficulty

is that they rely on a distinction between enlightened and unenlightened utterances, and this distinction turns out to be untenable. I then defend the claim that the simple sentence examples are to be taken just as seriously as the traditional puzzles about the propositional attitudes. One consequence of this is that the most tenable of the contemporary views of semantic content is the naïve view, since it treats all the counter-examples as involving intuitions about pragmatic rather than semantic features of language.

It is occasionally thought that the difficulties of providing an account of the semantic content of proper names are a result of the framework in which the questions are pursued. In chapter four I discuss the claim that the difficulty is an artifact of both the Fregean quantificational framework and the assumptions made by the new theory of reference advocated by Kripke in *Naming and Necessity*. Jaakko Hintikka and Gabriel Sandu claim that the arguments offered by defenders of the new theory of reference are fallacious. On their view once we acknowledge this the behaviour of proper names can easily be accounted for. Furthermore, Hintikka and Sandu claim that this behaviour is perfectly natural—indeed, to be expected—once we approach natural languages by means of game-theoretic semantics. I argue that there are two problems for this view. First of all, Hintikka and Sandu have misunderstood the target of the arguments of the new theory of reference, taking them to be making an essentialist claim about the nature of singular terms rather than an empirical claim about the actual behaviour of proper names in natural languages. Secondly, despite its independent interest, game-theoretic semantics does not, as it stands, provide an adequate account of the semantics of proper names.

Fregean quantificational theory has also recently been criticized by Gyula Klima, who claims that late medieval semantic theory provides a better account of the semantics of natural language and can solve a number of problems faced by current accounts. This claim is the subject of chapter five. Klima divides the anomalies of the Fregean quantificational paradigm into four broad categories: the problem of unrepresentable sentences; the problems of cross-reference and anaphoric pronouns; the various opaque contexts, including the problematic propositional attitude contexts; and the mismatch between the syntax of first-order logic and that of natural language, and suggests that medieval semantic theory provides a solution to all four. I provide an overview of the semantic theory of the late medieval philosophers and discuss Jean Buridan's use of it to explain the failure of substitution in propositional attitude contexts. I then argue that while both medieval semantics and Buridan's treatment of attitude ascription is of considerable interest, the solution he provides is a version of what are now known as hidden-indexical treatments of belief. As a consequence his theory is no more successful in dealing with the puzzle about the attitudes discussed in chapter three than modern versions, and provides no solution to the simple-sentence puzzles.

Having argued that the problem of proper names is not an artifact of the Fregean approach to quantification I return in chapter six to the question of whether the naïve theory provides an adequate account of names. The central claim of the naïve theory is that the our

intuitions about propositional attitude expressions and the simple-sentence counter-examples concern pragmatic features of language—in particular conversational implicatures—rather than the semantic content of the utterances in question. I argue that this distinction, despite its appeal, cannot be maintained in a way that provides support for the naïve theory. Defenders of the naïve view are correct to claim that there is no reason to think that native speakers of natural languages are sensitive to the distinction between semantically encoded and pragmatically imparted information. However, this distinction does not match up with the distinction between what is said and what is implied. Some aspects of what is said are pragmatically supplied, and some aspects of what is implied may be semantically encoded. I argue that the correct principle for determining whether a particular piece of information is part of what is literally said by an utterance is the availability principle, which states that speakers have conscious access to what is said by an utterance—i.e., its semantic content—though they generally do not have access to what is semantically encoded by a sentence—i.e., its linguistic meaning.

Since despite its appeal the naïve theory cannot be the correct account of the semantic properties of proper names, I return in chapter six to the puzzles of chapter three. I argue that the semantic contribution of proper names is highly context sensitive and not determined by any general rule or function from context to content, and thus that there can be no account of proper names that assigns them a uniform semantic content. I suggest that the actual linguistic function of proper names is to make the practice of using a name in a particular way salient, and that knowledge of this practice then serves as input for a pragmatic process which also takes account of extra-linguistic knowledge and other features of the context.

I then show that this means that there cannot be a compositional theory of semantic content as that is frequently understood. That is, the way in which the semantic content of an complex expression is determined by that of its parts cannot be spelt out by finite means, since the content of some of the primitive expressions—that of proper names—cannot be specified by finite means. Since many philosophers would regard this consequence as a *reductio* of the no-theory view, I also discuss various arguments in favour of the existence of a finitely specifiable compositional theory of semantic content and conclude that they are largely unconvincing.

Some may view the no-theory view as defeatist, and so I then argue that acknowledging the diversity and complexity of proper names is not tantamount to giving up on the philosophy of language entirely. I conclude chapter six by arguing that not only is there no prospect of rehabilitating the distinction need to sustain the view that the problem cases introduced in chapter three represent peripheral uses that need not concern the philosopher of language, but that even if that distinction could be preserved the resulting theory would be of little interest. The dissertation concludes with a short set of remarks which highlight the key claims made within.

CHAPTER ONE

Recent History

The twentieth century debate over singular terms—proper names, demonstratives, some uses of pronouns, and on some views some uses of definite and indefinite descriptions—has been largely couched in terms of the question of whether singular terms have senses. On one side of the debate we find those siding with Russell and maintaining that the information content of a genuine singular term is simply its referent—that singular terms are, as Mill suggested, mere tags. On the other side we have those who maintain that the information content of a singular term includes (and sometimes: is exhausted by) a sense, a mode of presentation, or a way of thinking of an object.

The view I argue for in what follows is that in fact none of the contemporary accounts of the semantic content of proper names and other singular terms is correct, and furthermore that there could be no account of this kind which explains the use of singular terms in natural language. I also argue that this result is neither as outrageous or as damaging to the project of philosophers of language as it might seem.

This view is particularly controversial in light of what some see as a growing consensus about singular terms and indeed, in philosophy of language in general. In his recent anthology, *Readings in the philosophy of language*, Peter Ludlow writes:

the philosophy of language, or at least a core portion of it, has matured to the point where it is now being spun off into linguistic theory. If this is correct, then the philosophy of language is simply following in the tradition of other branches of philosophy that have been extruded into the natural sciences: physics, biology, and perhaps most recently, cognitive psychology (Ludlow 1997, xiii).

A brief look at some recent literature might well suggest that Ludlow is right. Recent books by Mark Crimmins, Mark Richard, and Nathan Salmon all advocate the view that names are

directly referential combined with an account of propositional attitude contexts as involving modes of presentation, though they differ in their treatment of the mode of presentation as either semantically encoded or pragmatically imparted. I think however that there are good reasons to think this is an inadequate solution.

The general framework in which the discussion that follows sits is a Lockean one. Locke's insight is that an account of language must at least be compatible with, and at best provide an explanation of, our use of the language (Locke 1690, book III). One standard to which an account of the semantics of natural language should be held is that it not make the way in which we actually use language inexplicable or surprising. Nor should it suggest that language is fundamentally unsuited for this purpose. The best argument in favour of this position is the fact that language is conventional. I take it that we are largely agreed that in some broad sense language is a conventional human construction, though this is compatible with there being some constraints on what kind of language a human being could construct. For example, some philosophers and linguists claim that human language should be regarded as constrained by a Chompskian universal grammar. None the less, there will be a broad range of options available to us within that constraint, and it seems perverse to suggest that we use a language fundamentally unsuited to the purpose to which we put it. Even, if, unlikely as it may seem, we did once have such a language, the conventionality of language ensures that we would be in a position to correct that mistake.

This is not to say that there is no room for prescription in the philosophy of language, but just that such prescription depends on there being a descriptive account of the use and goals of language. Let me make the point clearer by analogy. Games and sports are clear examples of conventional activity, and in order to understand the practices of a group playing North American football one needs to understand what the rules and goals of the game actually are. However, once one understands what the goals and rules of the game are one may well be able to make suggestions to improve those rules. Indeed there are two codes for North American football, and if one asks a Canadian about the difference between the National Football League (NFL) code and the Canadian Football League (CFL) code she will likely explain that the CFL is a faster game which is more enjoyable to watch and demands more athletic abilities of the players, etc. If this is true, then the CFL code may be more suitable for meeting the expressed goals of North American football, but that fact alone is not sufficient to make the CFL code a description of the activities of NFL teams. Similarly, it may become clear that in certain areas natural languages are more or less suited for achieving the goals of human language, and may have more or less tractable (or even

consistent) semantical properties, but this fact does not make an improved semantics a correct semantics for natural language. In short then, the general philosophical framework in which this investigation occurs assumes that language is more or less well suited for the task for which it is used.

In the rest of this chapter I locate the question 'What is the semantic content of proper names?' against the background of twentieth century inquiries into the philosophy of language. I begin with a brief defense of the notion of a structured proposition and introduce the two basic questions of for the advocate of such propositions—what are their parts and how are they held together. I then discuss the views held by Frege and Russell on the former question, focusing on their accounts of proper names. Finally, I turn to Kripke's arguments against descriptivism, focusing on those aspects of his critique that are particularly relevant to questions about the semantic content of names rather than the means by which reference is fixed.

1. *Content*

Frege to Russell, 13 November 1904

Mount Blanc with its snow fields is not itself a component part of the thought that Mount Blanc is more than 4,000 metres high.

Russell to Frege, 12 December 1904

I believe that in spite of all its snowfields Mont Blanc itself is a component part of what is actually asserted in the proposition 'Mont Blanc is more than 4,000 metres high' (Frege 1980, 163, 169).

When this now famous exchange between Gottlob Frege and Bertrand Russell took place the debate about the nature of the information content of singular terms had already gone on (with some lulls now and then) for about 700 years, and the problem has continued to perplex philosophers of language in the 96 years since these words were written. The cynic may well conclude that this is just another confirmation of the uselessness of philosophy. What I will argue, however, is that the last 96 years have taught us something about the nature

of singular terms—surprisingly, it has taught us that there can be no account of their information content of the type both Frege and Russell sought.

The common ground that lies between philosophers with a roughly Fregean view of singular terms and those of a roughly Millian orientation is this. Sentences are not the primary bearers of truth. The primary bearers of truth or falsity are propositions, and these are the things which are expressed by sentences (relative to a context). Propositions are the meanings or the information content of sentences—the things we say when we utter sentences and the objects of belief, disbelief, knowledge, doubt, and so on. However, the relation between sentences and the propositions expressed by them is not one of simple tagging. The proposition expressed by a sentence is a function of the meanings—the *semantic content*—of the parts of the sentence. The philosopher of language who wishes to give a semantics for natural language must then present an account of what kinds of semantic content are contributed by the various classes of linguistic items, and of how these are combined to produce the proposition expressed by a sentence. It is this project which concerns both Frege and Russell in the letters above, and it is in the light of this project that most of the debate surrounding singular terms has been conducted.

1.1 Propositions

As noted above, one major area of agreement between both Millians and Fregeans is that there are propositions and that they have structure. Some philosophers have been skeptical about the existence of propositions, viewing them as metaphysically suspect. To begin, then, I will say a few things about what propositions are and why we might think propositions exist. The considerations that follow are suggestive, rather than conclusive, and the remainder of the thesis assumes the existence of propositions.

Semantics, on the view shared by both Millians and Fregeans, can be seen as concerned with three things—the meanings of expressions in the language, the truth values of particular uses of those expressions, and the significance of particular uses of those expressions (Crimmins 1992, 6). Propositions are what are expressed by a particular use of an assertive sentence—a statement¹—of the language. Furthermore, they are the ultimate bearers

¹ Some philosophers use statement and proposition interchangeably. I find it useful, however, to have a compact word for assertive expressions, and statement is a natural term for this. Any particular use of a statement states something, and on the view being considered the proposition expressed by it is what it states.

of truth and falsity, and thus particular uses of statements will inherit their truth value from the proposition they express. Propositions are abstract entities that are either identical with or essentially tied to their truth conditions. One consequence of this view is that it becomes the task of semantics to explain how statements in the language are correlated with the propositions they expressed.

1.1.1 Sentence tokens

One common reason for positing propositions is that they provide a simple explanation of the truth and falsity of sentences. There are a number of difficulties with regarding sentences as the primary bearers of truth. First of all, one considering this view must determine whether by sentences we mean sentence types or sentence tokens. The second view is rare, but some philosophers have maintained that it is sentence tokens that are the primary bearers of truth value. Notably, the 14th century philosopher Jean Buridan maintained this view, for reasons having to do with the paradoxes of self-reference. His view was that:

(1) The sentence numbered (1) in Chapter One of *The Meaning and Use of Proper Names* is false.

has, if supposed true, contradictory consequences, and so should be ruled simply false. On the other hand, there are no contradictory consequences to supposing that (2) is false, so it is simply true.

(2) The sentence numbered (1) in Chapter One of *The Meaning and Use of Proper Names* is false.

According to Buridan, a sentence is true iff (a) things are as it says they are and (b) no contradictions follow from supposing it to be true. Both token (1) and token (2) of the sentence meet criteria (a), but only token (2) meets criteria (b) (Buridan *Sophismata*, ch.8)². This view might be thought to be further supported by the fact that an utterance of sentence (3) by me is true, but an utterance of that sentence type is false when said by anybody else.

² See Buridan 1966 and 1977

(3) I am the author of *The Meaning and Use of Proper Names*.

Nevertheless, there are problems with the view that it is sentence tokens which bear truth value. Most notably, it seems to most of us that there would be truths (and falsehoods) even in a world in which there were no utterances at all. In a world just like ours except for the complete absence of language users, it will be true that water is H₂O, that kangaroos come from Australia, that there are no language users, and that there are no utterances. These last two examples are the most crucial because their truth depends on there being no utterances. Any utterance of them would be self-refuting. If it can ever be true that there are no utterances, then utterances cannot be the primary bearers of truth value.

1.1.2 Sentence types

Sentence types, however, fare no better. As noted above, there are many sentences like (3) which change truth value depending on context. If utterances of the sentence type corresponding to (3) get their truth value from that of their sentence type, then it seems that they must all have the same truth value, which they manifestly do not. Indeed, we would be reluctant to ascribe any truth value to the sentence type corresponding to (3). The usual response to this is to say that utterances of (3) are not actually all of the same type. We might instead maintain that my use of (3) is of the same sentence type as (4).

(4) Nicole Wyatt is the author of *The Meaning and Use of Proper Names*.

If we do so however, sentence types no longer consist of groups that exhibit lexical similarity, but are rather being individuated by some notion of *what is said* by an utterance—that is, what makes it plausible that (3) and (4) are of the same type is the intuition that they say the same thing, which is just to introduce the notion of a proposition.

Indeed, the idea that different sentences can be used to say the same thing, and the same sentence to say different things on different occasions, is the primary reason for positing propositions. The English speaker who says 'two plus three equals five' has said the same thing as the French speaker who utters the natural translation of this, but if you and I both utter (3) we have not. What is said by an statement cannot be equated with either the utterance itself or the sentence type, but is some third thing—what philosophers call a proposition.

One final comment. The view which I am advocating—that there is no general answer to the question 'what is the information content of a singular term?'—may be seen as a further reason for skepticism about propositions. If, the argument goes, we are going to accept the existence of abstract entities, we must have an account of what those entities, and their constituents, are. If no account can be given, then accepting them is even more metaphysically undesirable. For example, without such an account it might seem to be a puzzle as to how to individuate them. (The worry here is analogous to Quine's concern about the number of possible men in the doorway (Quine 1948, 4).) I myself find the arguments for the existence of propositions compelling, and this leaves me with the difficulty of positing the existence of abstract entities that we cannot adequately describe.³ I think however that this is no worse than believing in quarks. Propositions have sufficient theoretical unity to justify our believing in them, even if it is not entirely clear what sort of entities they are.

1.2 Structure

As noted above, if propositions are what are expressed by particular uses of statements, then part of the job of the philosopher of language is to explain how statements are correlated with the propositions that they express. It is often thought that one general constraint on this project is that there must be a finitely specifiable systematic connection between the statements and the propositions. That is, given the infinite number of expressions possible in a natural language, it will only be possible to specify the propositions associated with them if there is a systematic correlation between the elements of the statements (the individual words, their order, and the context) and the proposition expressed by them. It has seemed to many plausible to assume that we could only master language if there was such a systematic correlation (e.g., Crimmins 1992, 7).

It is this project—of explaining the systematic correlation between the words in a statement and the proposition expressed by that statement that both Frege and Russell are engaged in on the occasion of the exchange quoted above. They have in common two further assumptions however—first, that what is contributed by a word to a proposition (its semantic

³ This is not quite right. The problem, as will become clear in what follows, is that there seem to be some propositions that can only be described by means of the utterance(s) that expresses them. But this is also problematic. We may be able to individuate them, but their lack of independence from the utterances they are supposed to be the information content of might be thought to throw doubt on their theoretical utility.

content) is part of the resulting proposition. Those who think that propositions are sets of possible worlds, for example, still think that the word 'Clinton' makes a contribution to the proposition expressed by (5).

(5) Clinton is human.

However the information content of 'Clinton' is not part of the proposition—its parts are the possible worlds.⁴ Both Frege and Russell are committed to the view that the proposition expressed by (5) is composed of two parts—the information content 'Clinton' and that of 'is human'.

The second thing on which Russell and Frege agree is that propositions must be bound together in some way—or to put in modern terms, that propositions must have some structure. The problem is that two statements might have exactly the same constituents, and yet correspond to different propositions. For example, (6) and (7) express different propositions, but have the same constituents—the information contents of 'Bill', 'Hilary' and 'loves'.

(6) Bill loves Hilary.

(7) Hilary loves Bill.

1.2.1 Frege on binding

Frege's view is that some of the constituents of propositions themselves contain the materials for binding together the proposition. The senses (information contents) of some words—verbs, for example—are what Frege calls unsaturated. In this case, the sense of 'loves' is unsaturated, and it thus needs completion by both a subject and an object.

⁴ This way of putting things is perhaps arguable. Fitch, for example, in his entry on singular propositions in the Stanford Encyclopedia of Philosophy, suggests that propositions which are sets of possible worlds are singular propositions just in case the possible worlds themselves contain individuals (Fitch 1997). This view seems to rest on the implausible idea that if something Γ is a member of a set Δ , and, α is part of Γ , then α is part of Δ . But even when Γ is itself a set, and α a member of it, it is not generally true that α is a member of Δ . It is hard to make sense of what this claim amounts to if Γ isn't a set. Is my arm, for example, part of the set of all human beings? Clearly it is not a member of that set, but it is unclear how anything other than a member could be described as part of a set.

For not all parts of a thought can be complete; at least one must be 'unsaturated', or predicative; otherwise they would not hold together. For example, the sense of the phrase 'the number 2' does not hold together with that of the expression 'the concept prime number' without a link. We apply such a link in the sentence 'the number 2 falls under the concept prime number'; it is contained in the words 'falls under', which need to be completed in two ways—by a subject and an accusative; and only because their sense is thus 'unsaturated' are they capable of serving as a link. (Frege 1892b, 193)

What differentiates (6) from (7) is that in each case the senses of 'Bill' and 'Hilary' complete different parts of the incomplete sense of 'loves'.

1.2.2 Russell on binding

In contrast, Russell's view on what binds the constituents of a proposition is unclear. He appears to reject Frege's view by suggesting that the contribution of the verb 'differs from' is just the concept of difference.

Consider, for example, the proposition 'A differs from B'. The constituents of this proposition, if we analyze it, appear to be only A, difference, B. Yet these constituents, thus placed side by side, do not reconstitute the proposition. The difference which occurs in the proposition actually relates A and B, whereas the difference after analysis is a notion which has no connection with A and B. (Russell, 1903, 49)

He goes on to say:

Owing to the way in which the verb actually relates the terms of a proposition, every proposition has a unity which renders it distinct from the sum of its constituents. (Russell, 1903, 52)

The puzzle is what Russell means by the term 'actually'. He cannot mean that the terms are in actuality related in the way specified by the verb—this is what it is for the proposition to be true, rather than what it is that binds the proposition together. But if he just means that the

proposition is actually unified then the question of how this unification takes place remains unanswered.

In what follows I will simply assume that there is some account of what binds together the constituents of a proposition. While the question of what gives propositions structure is a more pressing question than most advocates of Millian and Fregean views seem to assume, my concern in what follows is with the nature of their constituents. Accordingly, I will simply follow the practice of representing propositions as ordered n -tuples of their constituents. The difference between (6) and (7) is thus represented by a difference in the order in which the information contents of 'Bill' and 'Hilary' occur in the n -tuples.

1.3 Names and singular terms

Suppose that one started thinking about the truth-conditions of sentences containing proper names, and that you came to the task without any prior philosophical commitments or knowledge of the philosophical problems associated with the task. It would be quite natural to conclude that a sentence like (8) was true just in case the property picked out by 'is a fast runner' was possessed by the person picked out by 'John'.

(8) John is a fast runner.

Our natural tendency, it seems, is to associate names with individuals and predicates with properties. Names appear to be associated directly with things, whereas predicates appear to be associated directly with a property—whatever that is—and only indirectly with the things that possess the property. This difference might well be seen to lie behind the fact that when you ask, in ordinary conversation, what the meaning of a proper name is the reply generally takes the form of giving some of the etymology of the name. If, for example, I tell you that the name 'Nipha' is a Plains Indian word that means snowflake, I am not telling you that it is correctly applied to snowflakes, but that it comes from a Plains Indian word for snowflake. In order to find out that the name is correctly used to pick out my sister the question that needs to be asked is not what 'Nipha' means, but who or what 'Nipha' is. Proper names it seems have reference but no meaning.

This is certainly the thought that motivates Millian accounts of names as 'mere tags' for the individuals to which they refer:

A proper name is but an unmeaning mark ...

When we predicate of anything its proper name; when we say, pointing to a man, this is Brown or Smith, or pointing to a city, that is York, we do not, merely by doing so, convey to the reader any information about them (Mill 1872, 22).⁵

Nevertheless, proper names are used to convey information—they are used in sentences that express propositions. In as far as the semantic content of a sentence is composed in some way from the semantic content of its parts, the question which arises is what the contribution made by a proper name is. This question, which seems so simple, turns out to be remarkably difficult to answer.

2. *Frege and Russell*

Consider again (8).

(8) John is a fast runner.

It is natural, and indeed no doubt correct, to view (8) as true just in case the individual John has the property of being a fast runner. This parity between property on one hand and individual on the other may well lead to the thought that the information content of the name just is the individual to which it refers. This Millian strategy is especially appealing when combined with the thought that names have do not have meaning in the way that predicates do. Unfortunately it quickly runs in to difficulties.

2.1 Frege

The view outlined above is, in essence, the view which first occurred to Frege and which appeared in his writing prior to the appearance of the distinction between sense and reference. As Frege immediately saw, however, the view faces an crucial difficulty.⁶

⁵ Mill himself applied this doctrine to proper names and names of attributes (e.g. whiteness, length) alone: "The only names of objects which connote nothing are *proper* names; and these have, strictly speaking, no signification" (Mill 1872, 21). By signification Mill here (following the mediaevals) means something like meaning as opposed to reference.

If we say 'The Evening Star is a planet with a shorter period of revolution than the Earth', the thought we express is other than in the sentence 'The Morning Star is a planet with a shorter period of revolution than the Earth'; for somebody who didn't know that the Morning Star is the Evening Star might regard one as true and the other as false. And yet the *Bedeutung* [reference⁷] of both sentences must be the same; for it is just a matter of interchange of the words 'Evening Star' and 'Morning Star', which have the same *Bedeutung*, i.e., are proper names of the same heavenly body (Frege 1892b, 138).

The problem arises most intensely for Frege in the case of identity statements, for a sentence of the form $a = a$ is knowable *a priori*, whereas a sentence of the form $a = b$ may well "contain very valuable extensions of our knowledge and cannot always be established *a priori*" (Frege 1892a, 151). If the only semantic value possessed by a name is its referent then we have two choices: the identity claim can be seen as relating the objects which are the referents of the names, or it can be seen as relating the two signs. Neither option satisfied Frege, for on the first the difference of cognitive value between $a = b$ and $a = a$ is mysterious, and on the second it would seem to assert something true only as a matter of linguistic convention rather than any scientific discovery (Frege 1892a, 151-152). Furthermore, as the quote from 'Function and Concept' (1892b) shows, this would not solve the more general problem. This problem is particularly acute for Frege as on his view the reference of a sentence is its truth-value, so that all true (false) sentences have the same reference—namely the true (false).

⁶ Even prior to this Frege was aware of the puzzles of informativeness. However, prior to (1892a) and (1892b) he solved this problem by treating identity as a relation between the terms rather than a relation between objects

⁷ Micheal Beaney (1997) has argued convincingly that there is no happy English translation for *Bedeutung*, and that those writing on Frege should perhaps adopt the practice of leaving it as an untranslated technical term. However, as my purpose here is merely to set the stage for what follows rather than engage in any substantive Frege scholarship I continue to use the standard term 'reference'. I have however used Beaney's translations (or adaptations of translations) in which *Bedeutung* remains untranslated.

2.1.1 Sense and reference

Frege's solution is to introduce a separate level of semantic value—the *sense* of an expression. In the case of a name the sense is a mode of presentation of the object to which the name refers. However, each sense presents the object to which it refers in only one way, rather than in its totality (Frege 1892a, 152-153). Name, sense, and reference thus stand in a hierarchical relationship:

The regular connection between a sign, its sense, and its *Bedeutung* is of such a kind that to the sign there corresponds a definite sense and to that in turn a definite *Bedeutung*, while to a given *Bedeutung* (an object) there does not belong only a single sign. The same sense has different expressions in different languages or even in the same language (Frege 1892a, 153).

For a given name there will (ideally) be just one sense,⁸ and for that sense just one reference, but the reference may be picked out by many senses and the sense by many names.

This extra level of semantic value is possessed not just by names but by all expressions—including complete sentences. As such it provides a general solution to a group of related problems—the possibility of regarding sentences which differ only in the presence of different but co-referential names as differing in truth-value, the puzzle of the informativeness of some identity statements, and the question of how it is that utterances containing names without referents can be meaningful.

Ordinarily an expression is used to talk about its reference, but in some contexts, such as when we quote someone (directly or indirectly) we instead use an expression to talk about its sense. In particular, when a sentence is part of a *that*-clause and placed within the scope of a propositional attitude, as in (9) or (10), the contribution it makes to the reference of the whole utterance is not its usual reference but its sense (Frege 1892a, 159-162).

(9) Copernicus believed that the planetary orbits are circles.

(10) I think that the planetary orbits are not circles

⁸ Frege is of course acutely aware of what he sees as the defects of natural language—its context sensitivity and the fact that there may be multiple senses attached to a proper name by the members of a linguistic community.

In other contexts, such as (11) and (12) the situation may be more complicated and a sub-sentence may do double duty referring both to its usual sense and its usual reference.

(11) Alex fancies that the Y2K bug will cause chaos.

(12) Carolyn recognizes that moral philosophy is important.

These cases differ in that while in (12) the sub-sentence refers to its normal referent (in addition to its sense), the effect of the attitude verb in (11) is to cause the clause to refer to the negation of its usual referent (Frege 1892a, 169). Thus (11) has the force of (11') and (12) the force of (12').

(11') It's not the case that the Y2K bug will cause chaos and Alex believes that the Y2K bug will cause chaos.

(12') Moral philosophy is important and Carolyn believes that moral philosophy is important.

Positing senses thus provides an explanation of the truth-conditions of attitude ascriptions. Since the cognitive value of a sentence is not its reference but its sense it also explains how $a = a$ can differ in cognitive value from $a = b$. Finally since a singular term can have a sense but no reference the theory provides Frege with a solution to the problem of empty names (Frege 1892a, 153;157).

2.1.2 Concept and object

More needs to be said about what Frege takes the sense of a complete sentence or a predicate to be. Before I turn to this task, however, I need to explain what the references of predicates and sentences are. Sentences, as noted above, have as their references one of the two truth-values, the true or the false. This view, which may seem slightly odd to us, is perfectly natural given Frege's account of what a concept is and how the senses of sentences—what Frege called *thoughts* (i.e., propositions)—are bound together.

In Frege's view a predicate picks out not a property as we usually understand it but a concept or function. What makes the referent of a predicate different from that of a name is that while the referent of the name is something complete in itself—an object—the referent of a predicate is inherently unsaturated. It, like a mathematical function, contains an empty place

which needs to be filled (Frege, 1891a, 137-139). Thus the referent of (13) is produced from two parts.

(13) Caesar conquered Gaul.

On one hand we have the individual Caesar (referred to by 'Caesar') and on the other the concept x conquered Gaul (referred to by 'conquered Gaul'). In the case of the mathematical functions that Frege models his notion of concept on, the combination of the function with an argument forms a name—in this case the name of a truth-value.

Consider, for analogy, the function x^2 . If this function is combined with an argument—say 2—what results is not a name of some complex but a name of the number four. We express this by saying that $2^2 = 4$. The case is similar with non-mathematical examples.

(14) the father of Alfred Frege

The parts of (14) refer to two things—Alfred Frege and the function the father of x . As a whole it refers to the value of the function for that argument—namely Gottlob Frege himself. In Frege's view the concepts picked out by predicates like 'conquered Gaul', 'is white' etc., are functions, not from objects to objects but from objects to truth-values.

The sense of a predicate is thus a mode of presentation of the concept to which it refers, and if we are to take seriously Frege's claim that "not all parts of a thought can be complete; at least one must be 'unsaturated', or predicative; otherwise they would not hold together" (Frege 1892b, 193), the sense of the predicate must itself capture the essential incompleteness of the concept. Its important to note here that the thought, unlike the referent of a sentence, has parts. It is natural then to think of Frege's thoughts as composed of the senses of the various parts of the sentence which expresses it. Thus we have the following diagram from one of Frege's letters to Husserl (Frege 1891, 149)⁹:

⁹ Given the use of 'proposition' in the preceding discussion this diagram has been modified by replacing 'proposition' with 'sentence' so as to avoid confusion.

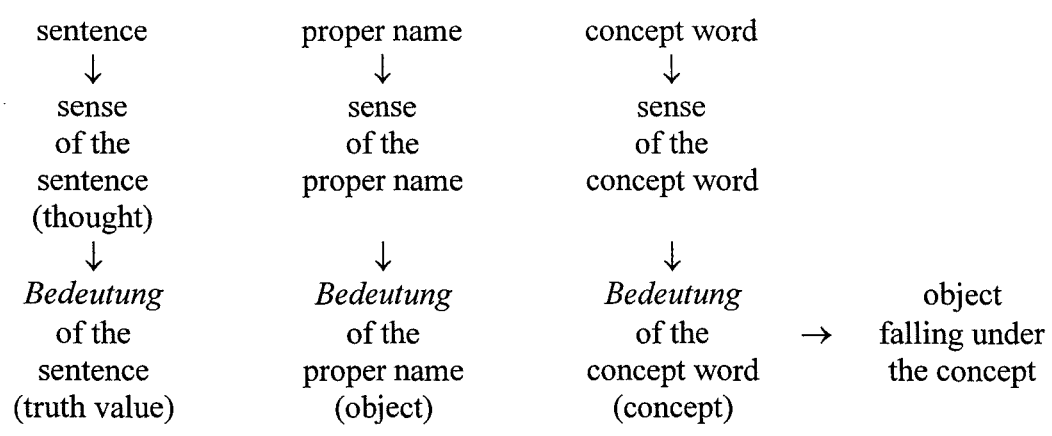


figure 1

One of the essential differences between predicates or concept words and names is that the former have a fourth level corresponding to them—that is, they have an extension in addition to a reference.

2.1.3 Thoughts

One thing which should be emphasized is that despite Frege's use of the term 'thought' to describe the sense of a sentence, the senses of sentences, names, and predicates (or concept words) are not psychological things. Contemporary philosophers inspired by Frege sometimes speak of modes of presentation as ways of thinking of an object or identify them with the way in which we represent that object to ourselves. In contrast for Frege a sense is a very different thing from an idea or a sense impression. He writes:

The idea is subjective: one man's idea is not that of another. There results, as a matter of course, a variety of differences in the ideas associated with the same sense. A painter, a horseman, and a zoologist will probably connect different ideas with the name 'Bucephalus'. This constitutes an essential distinction between the idea and the sign's sense, which may be the common property of many people, and so is not a part or mode of the individual mind (Frege 1892a, 154).

This distinction is quite natural when we realize that Frege's notion of sense was developed in part because of the need to accommodate the cognitive differences between co-referential complex singular terms like definite descriptions. One of Frege's central examples in 'On Sinn and Bedeutung' (1892a) is, unsurprisingly, a mathematical one. Suppose, he says, that we take

a triangle and inscribe in it three lines, a , b , and c , running from the vertices to the midpoints of the opposite sides. We then see that the point designated by the description 'the intersection of a and b ' is the same point as is designated by the description 'the intersection of b and c ' (Frege 1892a, 152). It is natural to think of these descriptions as providing us a method for identifying the point in question—a method that anyone could apply. The senses of the descriptions are not images or ideas of the point but specifications of it. As such they are available to anyone to use. Similarly, the thought which is the sense of a sentence serves as a route for determining what its truth-value is. Frege's thoughts are propositions rather than ways of thinking of propositions.

2.1.4 Names and semantic content

Since for Frege the class of names includes all of what would now be called singular terms—namely proper names, demonstratives, and pronouns—and also definite descriptions, the notion of the sense of a name provides a perfectly general account of the semantic content of such terms. Proper names and descriptions are for Frege of the same semantic class—each take objects as their referents and modes of presentation of those objects as their senses. The modes of presentation impose a condition which the referent satisfies—as Frege says, the sense of a name "serves to illuminate only a single aspect of the *Bedeutung*, supposing it to have one. Comprehensive knowledge of the *Bedeutung* would require us to be able to say immediately whether any given sense attaches to it. To such knowledge we never attain" (Frege 1892a, 153). Thus both names and definite descriptions have their references fixed as whatever satisfies that condition. Frege's view is a variety of what has come to be known as descriptivism—namely the view that the basic mechanism by which the references of proper names are fixed is the same as by which the references of descriptions are fixed. This of course does not commit him to saying that each proper name is equivalent to some definite description, and Frege nowhere endorses this view.

2.2 Russell

Russell disagreed with Frege's treatment of singular terms in two central ways. First of all, he opposed the bifurcation of semantic values, claiming that we cannot genuinely make sense of talk about meaning (i.e., sense) as opposed to reference or denotation (Russell 1905, 49-51). Secondly, he rejected the view that descriptions were members of the same semantic

class as genuine singular terms. As is well known, Russell argues that definite descriptions are not genuinely referential terms—indeed that they are not genuine terms at all. In his view each sentence in which a definite description occurs expresses a proposition in which there is no element which corresponds to the description 'the so-and-so'.

2.2.1 Definite descriptions

The problem with treating descriptions as falling into the same semantic class as proper names like 'John' and demonstratives like 'this' is, in Russell's view, that it obscures the nature and structure of the description.

This sort of phrase, 'The author of *Waverley*', is not a name because it is a complex symbol. It contains parts which *are* symbols. It contains four words, and the meanings of those four words are already fixed and they have fixed the meaning of the 'The author of *Waverley*' in the only sense in which that phrase does have any meaning. In that sense its meaning is already determinate, i.e., there is nothing arbitrary or conventional about the meaning of that whole phrase, when the meanings of 'the', 'author', 'of', and '*Waverley*' have already been fixed (Russell, 1918, 244).

Russell's point is that 'The author of *Waverley*', unlike 'Scott' or 'this', has meaningful parts and a structure, and its meaning is related to the meanings of the parts just as the meaning of a complete sentence is related to the meanings of its parts. Frege's view, which treats the semantic properties of 'The author of *Waverley*' as on a par with those of names and demonstratives, obscures this feature of descriptions.

Russell's well known solution to both the problem of relating the meaning of the description to its parts and to the puzzles which motivated Frege's introduction of the notion of sense is his theory of descriptions.¹⁰ On Russell's view the essential role of 'the' in definite descriptions is to indicate that there is a unique entity with the property that follows it. Thus an utterance of (14) has (14') as its content.

¹⁰ The idea that the meaning of descriptions should be explained in terms of the meanings of their parts does not, admittedly, appear in the original paper 'On Denoting' (1905). However 'The Philosophy of Logical Atomism' (1918) makes quite clear that by then Russell thought that the primary reason for not treating definite descriptions as names was their structure. In this Russell was certainly correct.

(14) The author of *Waverley* is Scott.

(14') There is one and only one author of *Waverley*, and that person is Scott.

In general, where we have a sentence of the form 'the G is F ', it should be properly expanded to a sentence of the form of (15), which has as its logical form (15') (Russell 1905, 44; 51: 1918, 249-251).

(15) There is one and only one x which is G , and that x is F .

(15') $\exists x \forall y (Gx \ \& \ (Gy \rightarrow y = x) \ \& \ Fx)$

In addition to elucidating the relationship between the meaning of a definite description and the meanings of its parts, Russell's theory solves three problems for definite descriptions (Russell 1905, 47-48). First of all, it solves the problem of how identity statements between two definite descriptions or between a definite description and a name or demonstrative can be informative. To continue with Russell's own example, it is no longer a puzzle how it is that (14) can express a different proposition from (16).

(14) The author of *Waverley* is Scott.

(16) Scott is Scott.

Furthermore, since (14) expresses a different proposition from (16), the puzzle of how someone could believe (16) without believing (14), or be curious about the truth-value of (14) without having any interest in (16), is also solved. Finally, and perhaps from Russell's point of view most importantly, we have an explanation of how sentences containing definite descriptions which do not denote anything can be meaningful and thus have a determinate truth-value. Since the denotation of the description (the thing which satisfies it) does not appear as a constituent of the proposition expressed, the lack of a denotation does not render the sentence meaningless.

2.2.2 Logically proper names versus ordinary proper names

Russell contrasts definite descriptions with what he calls logically proper names. Logically proper names genuinely stand for things, rather than merely denoting them. The

meaning of the logically proper name is exhausted by the thing to which it refers. What enables Russell to avoid the puzzles of informativeness, attitude ascription, and empty names is his severe restriction on the circumstances in which a logically proper name can be used. Logically proper names can only be used to name those things—particulars—with which we are directly acquainted (Russell 1918, 200-202). Given that we are directly acquainted with something, in Russell's sense, then there is no possibility of not knowing that two logically proper names are co-referential, or of there being no referent for the name. However the things that we are directly acquainted with are limited to sense data and (perhaps) ourselves.

It is often said that Russell thought that all ordinary proper names were merely abbreviated definite descriptions, and this is reasonably described as his official view.

The names that we commonly use, like 'Socrates', are really abbreviations for descriptions ... We are not acquainted with Socrates, and therefore cannot name him. When we use the word 'Socrates', we are really using a description. Our thought may be rendered by some such phrase as 'The Master of Plato', or 'The philosopher who drank the hemlock', or 'The person whom logicians assert to be mortal', but we certainly do not use the name as a name in the proper sense of the word (Russell 1918, 200-201).

However it is worth emphasizing that Russell himself was not entirely happy with this account. He suggests that what we intend ordinary proper names to do is refer directly, but that we are frustrated in this by our lack of acquaintance with the object.

It would seem that, when we make a statement about something only known by description, we often *intend* to make our statement, not in the form involving the description, but about the actual thing described. That is to say, when we say anything about Bismarck, we should like, if we could, to make the judgement ... of which he is a constituent. In this we are necessarily defeated ... But we know that there is an object *B* called Bismarck, and that *B* was an astute diplomatist. We can thus *describe* the proposition we should like to affirm, namely '*B* was an astute diplomatist', where *B* is the object which was Bismarck. What enables us to communicate in spite of the varying descriptions we employ is that we know there is a true proposition concerning the actual Bismarck, and that however we may vary the proposition (so long as the description is correct) the proposition described is still the same. This proposition,

which is described and is known to be true, is what interests us; but we are not acquainted with the proposition itself, and we do not know *it*, though we know it is true (Russell 1910, 22-23).

Russell's point here of course is that although on his view the propositions we express—the semantic content of our utterances—do not involve the individuals that are the denotations of the descriptions that abbreviate ordinary proper names, the propositions we are really interested in do. Thus, while the propositions we actually express by means of ordinary proper names are of the form 'the so-and-so ϕ 's', there is a difference (though not a semantic one) between ordinary proper names and descriptions. Ordinary proper names indicate our interest in the proposition of which the individual described is actually a part.

2.3 Descriptivism

The common ground between Frege and Russell views on proper names is their descriptivism. Despite Russell's views about genuine referring terms, his account of ordinary proper names has significant points of contact with Frege's. Both agree that descriptive criteria play an essential role in picking out the thing denoted (in Russell's terminology) by the proper name. Thus both agree that descriptions and ordinary proper names are in the same semantic class, although they do not agree on whether that class is the class of genuinely referring expressions. It is the notion that the referent of a proper name is whatever satisfies the properties associated with its sense—or whatever satisfies the description the name abbreviates—that came under such devastating attack by Saul Kripke.¹¹

¹¹ Wettstein (1991) argues that this commonality is incidental and that the real area of agreement lies in the idea that in order to refer to something we must have a cognitive fix on it. He writes "This is the traditional idea that if one is to speak or think about a thing, one must possess a discriminating cognitive fix on the thing, that something about one's cognitive state must distinguish the relevant item from everything else in the universe" (107). The issues are delicate, but I think to ascribe this view to Frege is a mistake. Frege has almost nothing to say about the cognitive states required in order for me to have an idea of one sense rather than another, and Frege is quite clear that a sense, whatever else it is, is not a cognitive state but the object of that state. The fact that the sense must determine the referent—and thus distinguish it from everything else in the universe—leaves open the possibility that the cognitive state needed to count as grasping a sense does not determine the sense.

3. *The critique of descriptivism*

The hybrid Fregean-Russellian picture of a descriptive sense as the content of a proper name was not without its critics in the first part of this century, but it suffered its most serious set back as a result of Kripke's critiques in *Naming and Necessity*. The Millian view of names as directly referential was familiar as an alternative since at least Smullyan's 1947 review of Quine. Nevertheless, the content and formulation of the critiques made by Kripke in *Naming and Necessity* are a touchstone for contemporary treatments of names and the problems of semantic content. As John Burgess has described it, Kripke's discussion opens up the possibility of a third way—or perhaps many ways—between Fregean senses and Millian tags (Burgess 1998, 57).¹²

In understanding both Kripke's own arguments and related arguments such as Putnam's twin-earth thought experiment, it is useful to distinguish between five different conceptions of sense (Oppy 1992, 448-449).

- (a) sense₁: a purely conceptual or totally descriptional representation which all fully competent speakers associate with a singular term
- (b) sense₂: a set or cluster of properties which are mentally represented and which speakers (more or less) idiosyncratically associate with a singular term
- (c) sense₃: the mechanism by which the reference of a singular term is semantically determined
- (d) sense₄: the semantic content or information value of a singular term
- (e) sense₅: the reference of occurrences of singular terms which are embedded within the scope of verbs of propositional attitude, etc

Now, while there is room for dispute over what Frege would have thought of sense₁ or sense₂, it seems clear that he identified sense₃, sense₄, and sense₅.¹³ The pre-Kripke Millian view is

¹² Burgess thinks the first hints that there must be a third way can be found in Quine's responses to the early critics of his attack on quantification into modal contexts.

¹³ Actually, it is not entirely correct to claim that Frege identifies sense₅ with sense₄, as it suggests that whenever a singular term occurs within the scope of a propositional attitude ascription it takes its usual sense as a referent. However, this is not the case for singular terms within the scope of more than one propositional attitude ascription. Nonetheless, (e) could be reformulated to capture this, and we will only be concerned with single embeddings.

committed to holding that there is nothing corresponding to sense₃, that sense₄ is identical to the referent of the singular term, and seems further to be committed to the view that sense₁ and sense₂, if they exist, are irrelevant to semantics. It is unclear what they might have wanted to say about sense₅. *Naming and Necessity* argues that there is no single notion that corresponds to sense₁, sense₃, and sense₄ (or to sense₂, sense₃, and sense₄), that names have nothing like sense₁, and that the correct story to tell about sense₃ is a causal one.¹⁴ The key way in which Kripke differs from the early Millians is, as Burgess points out (Burgess 1998, 61), in his acknowledgement of the existence of something corresponding to sense₃. It is in this sense that Kripke's views represent a third way. Further, Kripke differs from both the early Millians and the later direct reference theorists in rejecting the view that the referents of the singular terms are their semantic contents (sense₄), and remains neutral on the question of what, if anything, sense₅ is (Kripke 1980, 20-21). In what follows I will focus of Kripke's arguments against the identification of sense₁ with sense₃ and sense₄, as it is these arguments which most influence the various contemporary views about the semantic content of singular terms. Accordingly, I will not have much to say about the arguments for a causal account of sense₃ or those against the existence of anything like sense₁. I begin with a brief survey of the familiar arguments from *Naming and Necessity*.

3.1 The modal argument

The target of the modal argument is the view that if the reference of a term is fixed by a description (i.e., that sense₁ (or sense₂) is sense₃), then it follows that that description is the meaning (semantic content) of the term (i.e., that sense₁ (or sense₂) is sense₄). Kripke's own example is not a proper name, but the term meter. Suppose that we allow that the reference of the phrase 'one meter' has been stipulated by someone as the length of a certain stick in Paris, S, at t₀.

¹⁴ Oppy suggests that Kripke's target is just the identification of sense₁, sense₃, and sense₄. However, Kripke's examples generally involve a speaker who associates a description with a singular term, not some shared description associated with the singular term. The trouble is mainly that in *Naming and Necessity* Kripke does not adequately distinguish between sense₁ and sense₂ (see Evans 1973, 1-2).

Even though he uses [the description] to fix the reference of his standard of length, a meter, he can still say, 'if heat had been applied to this stick S at t_0 , then at t_0 stick S would not have been one meter long.

Well, why can he do this? ... a simple answer to the question is this: Even if this is the *only* standard of length that he uses, there is an intuitive difference between the phrase 'one meter' and the phrase 'the length of S at t_0 '. The first phrase is meant to designate rigidly a certain length at all possible worlds, which in the actual world happens to be the length of S at t_0 . On the other hand, 'the length of S at t_0 ' does not designate anything rigidly. ... So we can say of this stick, the same way we would of any other of the same substance and length, that if heat of a given quantity had been applied to it, it would have expanded to such and such a length. ... There is no conflict between that counterfactual statement and the definition of 'one meter' as 'the length of S at t_0 ', because the 'definition', properly interpreted, does *not* say that the phrase 'one meter' is to be *synonymous* (even when talking about counterfactual situations) with the phrase 'the length of S at t_0 ' (Kripke 1980, 55-56).

The point here is that the modal profile of (17) and (18) differ.

(17) The length of S at t_0 is the length of S at t_0 .

(18) The length of S at t_0 is one meter.

(17) is necessarily true, while (18) is contingent, and this is so because 'one meter' is a rigid designator—it refers to the same thing at every possible world—while the description 'the length of S at t_0 ' picks out different things in different possible worlds. The situation is parallel for proper names. For example, (19) is presumably contingent—Prior might not have been a philosopher at all.

(19) If Prior exists, then he invented tense logic.

If, however, inventing tense logic is part of the semantic content of the term 'Prior', then (19) is necessarily true. It is part of the meaning of the term 'Prior', that its referent invented tense logic. And so for any property that is proposed as part of the semantic content of a term. In general, for any non-trivial property ϕ , the sentence 'If Prior exists then he ϕ ed' will be contingent. So it seems that whatever the semantic content associated with 'Prior' is, it does

not have any impact on the necessity or contingency—the modal profile—of the sentences in which 'Prior' occurs. But if the semantic content associated with a name has no impact on the modal profile of sentences in which the name occurs, it cannot have any impact on their truth conditions. After all, contingency and necessity are properties that a sentence has in virtue of its truth and falsity in different circumstances (that is, in virtue of its truth conditions). And this is so *even* if the reference of the proper name is fixed by the description the ϕ .

3.2 The semantic arguments

Kripke's semantic arguments instead target the view that anything like sense_2 plays the role of sense_3 . Thus they are designed to show that the descriptions associated with a proper name n by a speaker usually do not determine the referent of the name NN —the possession of a uniquely denoting description is not required for reference, and the speaker may refer to an object using NN even if the descriptions he associates with NN uniquely pick out some other object.

The problem with requiring the possession of a uniquely denoting description for an object in order to refer to it is, Kripke points out, that there are many perfectly ordinary cases of reference in which this requirement is not met:

most people, when they think of Cicero, just think of *a famous Roman orator*, without any pretension to think either that there was only one famous Roman orator or that one must know something else about Cicero to have a referent for a name (1980, 81).

Most of us regularly successfully refer to people for whom we do not have such uniquely denoting descriptions.

Secondly, the possession of a uniquely denoting description which one associates with a name does not ensure that that name refers to the object denoted by that description. That is, the properties we associate with the name NN and take to be uniquely possessed by an object o , can turn out to be instead uniquely possessed by an object o' *without* o thus being the referent of NN . Suppose, to use the now famous example, that the description associated by most people with the name 'Gödel' is 'the man who proved the completeness of arithmetic' and it turns out that instead the theorem was proved by Schmidt. If the description associated with the name does determine the referent, then it would follow that when most people used the name 'Gödel' they would (a) refer to Schmidt and (b) intend to do so. But this seems wrong. In

such a case we would withdraw the claim that the description applied to Gödel, but we would still call him 'Gödel' (Kripke 1980, 83-85; 87f37).

3.3 The epistemic arguments

The final type of argument given by Kripke targets the view that the semantic content of the name (i.e., sense_4) is a description, or some cluster of descriptions, which are associated with the name (i.e., sense_1 or sense_2). Consider a sentence of the form (20).

(20) If ϕ exists, then ϕ is ϕ .

There is no doubt that sentences with the form of (20) are known to be true *a priori*. In particular, where d is a property then we can know 'If the d exists then the d is the d ' *a priori*, and where D is a set of properties we can know 'If the thing possessing most of the properties in D exists then the thing possessing most of the properties in D is the thing possessing most of the properties in D ' to be true *a priori*. Now if the semantic content of a name NN is equivalent to a description or some cluster of descriptions—that is, if the name NN and the description in question are synonymous—then sentences of the form of (21) should also be synonymous.

(21) If NN exists, then NN is ϕ .

(Where ϕ is the appropriate description.) But this, Kripke suggests, just doesn't seem to be the case. Even in a case where the referent of a name is the thing which satisfies the description it does not seem that I know a sentence of the form of (21) *a priori*:

I think that my belief about Gödel *is* in fact correct and that the Schmidt story is just a fantasy. But the belief hardly constitutes *a priori* knowledge (Kripke 1980, 87).

3.4 The twin-earth argument

Advocates of description theories of various types often maintain that Kripke and subsequent opponents of Fregean views have failed to cast the net wide enough in considering

candidates for the content of proper names.¹⁵ It is in response to this sort of claim that Nathan Salmon has adapted Hilary Putnam's twin-earth thought experiment¹⁶ to show that whatever the descriptive content associated with a proper name is, it is not sufficient to determine reference (Salmon 1986, 66-67).

Imagine that in the far reaches of the universe there is a planet that, against all odds, is a perfect duplicate of earth—call it twin-earth. On this planet lives a woman, Aileen, who in all respects lives a life identical to that of a woman (also called Aileen) living here on earth—their streams of consciousness are qualitatively indistinguishable, and their brain matter passes through the same configurations in the same order. Each has a husband named Hubert, but where the earthly Hubert weighs precisely 74 kilos the alien Hubert weighs 74.000000001 kilos—a difference in weight which has no effect on the qualitative aspects of Hubert-related experiences. For all intents and purposes the Huberts are indistinguishable. Suppose then that the woman simultaneously (and sincerely) utter the sentence 'Hubert weighs 74 kilos'.

Suppose that the descriptive content of terms does determine their referent. Since the information content of the sentences uttered by the women is different—one concerns earthly Hubert and the other alien Hubert—then earthly Aileen and alien Aileen must be grasping different descriptive content when they use the term 'Hubert'. But how can this be? Surely the descriptive content which one is grasping is determined solely by one's purely psychological state. What else other than one's state of consciousness could determine what descriptive content one is grasping? However, the Aileens are qualitatively identical in every way. Most importantly they have the same stream of consciousness and the same configuration of brain matter. They are, we must conclude, in the same psychological state—the same state of consciousness. Since the Aileens attach exactly the same descriptive content to the term 'Hubert', something other than that content must be determining the reference of the terms.

In fact, not only does it seem that something other than descriptive content must determine reference, but also that there must be something more to the semantic content of the names than the descriptive content. After all, the two utterances of the string of symbols 'Hubert weighs 74 kilos' have different truth values, and thus must encode different content. Since by hypothesis all of the other words in the sentence have the same content on twin-earth

¹⁵ For example, Frank Jackson writes that: "The objections brought against the theory ... overlook obvious candidates to be the descriptions or properties that secure reference according to the theory" (Jackson 1998b, 1).

¹⁶ See Putnam 1975.

as on earth, the two occurrences of the string of symbols 'Hubert' must encode different content.

3.5 The error argument

There are other views which respond to the twin-earth argument and its relatives by ascribing some descriptive content to names without maintaining that this content fixes the referent (i.e., they give up the identification of sense_3 and sense_4).¹⁷ For example, it might be maintained that the content of a proper name was the ordered pair consisting of the referent itself and a description associated with the name or a way of thinking about the referent. The error argument is targeted against this sort of view. It assumes that the conceptual content that we associate with a name may include varying amounts of error—indeed, that it could be completely erroneous. Suppose then that the content we associate with the name 'Plato' fits Aristotle far better, due to a series of copying errors. The conceptual content we associate with 'Plato' is erroneous. Nevertheless, the sentence 'Plato wrote the *Phaedrus*' would not encode any false information. It would be simply true. The fact that the conceptual content of the name 'Plato' does not actually fit Plato is irrelevant. However, since the conceptual content of the name is erroneous, and the sentence 'Plato wrote the *Phaedrus*' is simply true—the information it encodes concerning Plato contains no error. The conceptual content cannot form any part of the information semantically encoded by 'Plato wrote the *Phaedrus*', and thus cannot contribute to its truth conditions (Salmon 1986, 69-70).

3.4 The moral

There have been various attempts to defend the view that a description of some sort fixes the reference of a proper name, and also to defend the view that this description is in fact one that individuals are (perhaps implicitly) in possession of that description.¹⁸ However, much of the appeal of descriptivism was that it provided an account of the semantic content of a name which both ascribed different content to different co-referential names and provided a candidate for the referent of names in propositional attitude contexts that supported the intuition that those contexts were opaque. Given this, it is Kripke's modal arguments which

¹⁷ This is the sort of view advocated in Putnam 1979.

¹⁸ For a recent example of both see Jackson 1998b.

are most devastating to the hybrid view.¹⁹ If even on the assumption that the reference of a name is fixed by a description that description cannot be the semantic content of the name, then a Fregean sense does not solve the puzzle that motivated it—the problem of the apparent informativeness of identity statements between co-referential names.

Whether a causal theory of the type advocated by Kripke or some form of descriptivism provides the right account of how the reference of a proper name is fixed, we still need to give an account of the semantic content of proper names. Kripke himself remarks that, despite the arguments of *Naming and Necessity*, sentences which differ only in the presence of different co-referential proper names are not in his view completely interchangeable, and considers the question of what propositions are expressed by sentences like (22) and (23) a vexing one (Kripke 1980, 20-21).

(22) Hesperus is Hesperus.

(23) Hesperus is Phosphorus.

It is to the contemporary answers to Kripke's vexing question that I now turn.

¹⁹ Given various difficulties with the *a priori/a posteriori* distinction, and the debate over their relationship to the analytic/synthetic and necessary/contingent distinctions, a descriptivist who can answer the modal argument has various options open to deal with the epistemic arguments.

CHAPTER TWO

The contemporary views

The contemporary accounts of the semantic content of proper names have two common assumptions. They agree that proper names, whatever their other properties, are rigid designators—that is that proper names designate the same individual in every possible world. Furthermore, they agree that an account of proper names must give some answer to Frege's puzzle about the cognitive significance of identity statements involving different co-referential names. Advocates of the various views also maintain that Frege was at least correct in claiming that the way in which an object is presented to someone can make a difference to the beliefs that they form. Beyond this there is little agreement. However the contemporary views can be seen as falling into two broad classes. Millian views which maintain that names are directly referential and that their semantic content is exhausted by their referents, and neo-Fregean views which retain the idea that proper names have associated senses.

In what follows I summarize six contemporary accounts of names. I begin by arguing that even if descriptivism can be defended as an account of the means by which the reference of a proper name is fixed it cannot serve as an account of the semantic content of names. I then turn to views which do provide an account of the semantic content of names. Two of these—the naïve theory and the hidden-indexical theory—are Millian accounts. Naïve theorists maintain that co-referential names are substitutable without change in either semantic content or truth-value in all contexts, including propositional attitude ones. In contrast defenders of the hidden-indexical account suggest that while in such contexts the semantic content *provided* by the name is just its referent, the semantic content *traceable* to the use of the name goes beyond this, and it is this latter content that is affected by substitution. In contrast the two Fregean accounts—neo-Fregeanism and the neo-Fregean hidden-indexical theory—defend the view that the semantic content of the name is something like a Fregean sense, though they differ over the mechanism by which this sense is provided.

Finally the sixth account—the indexical view of names—attempts to integrate the intuitions underlying both views.

1. *Descriptivism reborn?*

One key element of the modal argument is the conclusion that proper names appear to be rigid designators. Descriptivists have revised their theories in one of two ways in response to this attack—either proposing that names are equivalent to descriptions which are required to take wide-scope over modal operators in sentences in which they occur, or proposing that names are equivalent to rigidified descriptions.¹ Both of these options have their difficulties.

1.1 Wide-scope descriptivism

The first option, wide-scope descriptivism, can correctly account for the truth conditions of sentences like (6).

(6) Necessarily, Prior is the inventor of tense logic.

$$\Box [(p = (\text{the } x: Tx))]$$

On the wide-scope view there is no reading of (6) on which it is equivalent to (7).

(7) It is necessary that: the inventor of tense logic is the inventor of tense logic.

$$\Box [(\text{the } x: Tx) = (\text{the } y: Ty)]$$

Instead the descriptive content of the proper name is semantically required to take wide-scope over the modal operator, so that (6) is always equivalent to (8).

(8) The inventor of tense logic is necessarily the inventor of tense logic.

$$(\text{the } x: Tx) [\Box (x = (\text{the } y: Ty))]$$

¹ The first option is defended in Dummett 1981. The second option is discussed favorably in Jackson 1998b and critically in Recanati 1993.

However, the modal argument as expressed above is concerned not with the truth conditions of sentences containing modal operators, but with the modal profile of sentences containing names. The claim is that the modal profile of (9) and (10) differ.

(9) Prior is the inventor of tense logic.

(10) The inventor of tense logic is the inventor of tense logic.

In particular, it intuitively seems that (10) will only be false in worlds where there is no unique inventor of tense logic but true otherwise, whereas (9) would be false in (among others) worlds in which Gödel invents tense logic and Prior remains in the New Zealand Armed Forces for his entire career. However, since neither (9) or (10) contain modal operators, the wide-scope analysis seems unable to account for them.

Indeed, Francois Recanati has suggested that once we consider (9) and (10) we are in a position to realize that descriptions given wide-scope over modal operators also do not designate rigidly (Recanati 1993, 9-10). When the description is given wide-scope over the modal operator in (8), the sentence says that the person who is the inventor of tense logic in the actual world is also the inventor of tense logic in every other world. But, as Recanati puts it, the sentence "does not tell us *which* world is supposed to play the role of 'the actual world': with respect to any world w , the actual world will be that very world w " (Recanati 1993, 9). Recanati's point is that while (6) and (8) may have the same truth conditions when considered in this world, they, just like (9) and (10), have different modal profiles. When considered with respect to the world in which Gödel invented tense logic, (8) is true iff Gödel is the inventor of tense logic in every relevant possible world, whereas it seems that (6) would still be judged to be true iff Prior was the inventor of tense logic in every relevant possible world. Relative to the Gödel world, (8) is equivalent not to (6), but to (11):

(11) Necessarily, Gödel is the inventor of tense logic.

Michael Dummett has suggested that the problem with the claim that (9) and (10) differ is that there are no pre-theoretic intuitions about the modal profile of sentences (Dummett 1981, 582). Instead, when asked about the modal profile of (9) and (10) we rely on our intuitions about sentences with modal operators—sentences like (6), (12), and (13).

(12) Possibly, Prior is the inventor of tense logic.

(13) At a world w , Prior is the inventor of tense logic.

In each of these cases the modal operator will force the descriptive content of 'Prior' to take wide-scope, whereas the parallel sentences involving two description will have two readings, thus giving rise to the intuition that modal profile differs. Thus the wide-scope analysis accounts, in Dummett's view, for all the genuine intuitions about names in modal contexts (Dummett 1981, 577-579).

Presumably Dummett would extend his account to cover Recanati's claim that (6) and (8) differ in modal profile, claiming that in this case the only genuine intuitions in question are intuitions about (14) and (15).

(14) Necessarily, necessarily, Prior is the inventor of tense logic.

(15) Necessarily, the inventor of tense logic is necessarily the inventor of tense logic.

The thought that (8) might differ from (6) is on this view merely a consequence of the fact that (15) can have two readings—one on which it is equivalent to (15') and one on which it is equivalent to (15'').

(15') $\Box [(\text{the } x: Tx) [\Box (x = (\text{the } y: Ty))]]$

(15'') $(\text{the } x: Tx) [\Box \Box (x = (\text{the } y: Ty))]$

Since the wide-scope view will treat (14) as equivalent to (15''), Dummett can claim that all the intuitions are accounted for. Unfortunately the claim that we have genuine pre-theoretic intuitions about (14) and (15) but not about the modal profile of utterances is starting to look more and more implausible. It seems that it is now open to an advocate of the modal argument to point out that (14) and (15'') differ in modal profile, thus forcing a defender of the wide-scope analysis to maintain that we are giving answers based solely on our intuitions about sentences with three iterated modal operators, and so on. Furthermore, it is utterly unclear what the origins of our intuitions about sentences with modal operators are if it is not the

consideration of what would be the case in counterfactual circumstances, and this kind of consideration can equally well be applied to the modal profile questions.²

Indeed, the modal profile objection can be reworked to evade Dummett's strategy entirely. We have been phrasing the objection in terms of the truth and falsity of the sentence in different possible worlds, and it is this that Dummett claims we have no intuitions about. Dummett surely cannot maintain that we have no pre-theoretical intuitions about the truth-conditions of sentences like (9) and (10). However the intuitions exploited in the modal profile argument seem just to be intuitions about the truth conditions of the sentences involved. We could have put the objection by saying that in the case of (9) there is a single individual—namely Prior—such that (9) will be true in a world w just in case that individual is the inventor of tense logic in w , whereas for (10), there is no single individual such that (10) will be true in w just in case that individual is the inventor of tense logic.³ But in this formulation the use of the theoretical notion of possible worlds seems incidental. What is essential is that (9) is true just in case a particular individual is the inventor of tense logic, whereas (10) is true just in case there is a single inventor of tense logic. Nor is this difference merely a feature of the fact that (10) is an identity statement between two terms. The problem can be seen just as clearly with respect to a far more mundane example adapted from Recanati.

(16) The prime minister of New Zealand might have been a member of the
National Party.

(17) Helen Clark might have been a member of the National Party.

There is a unique individual x such that (17) is true just in case x is a member of the National Party, but there is not a unique individual y such that (16) is true just in case y is a member of the National Party.⁴

² Of course the question of which counterfactual situations are relevant is a genuine one which resulted in substantial disagreement about the domain of the possible throughout the history of philosophy—see Knuuttila 1993 and Wyatt 2000. The multiplicity of intuitions about which counterfactual states of affairs are relevant means that Dummett cannot have recourse to the claim that iterated modalities collapse, as this is only the case for relatively strong modal logics.

³ This is parallel to Recanati's formulation of the objection (1993, 9).

⁴ It should be pointed out that I am assuming that the description in question is attributive rather than referential. Since the claim of the descriptivist is that the referent of the name is whomever satisfies the associated

1.2 Rigidified descriptions

This line of criticism can also be extended to the second option, that of treating names as rigidified descriptions. Recanati's observation that sentences in which descriptions are given a wide-scope reading do not indicate which world is the actual world is just as applicable to sentences containing rigidified definite descriptions. Compare (17) to (18).

- (18) The actual prime minister of New Zealand might have been a member of the National Party.

Just as in the case of wide-scope descriptivism, (18) will be true with respect to a world w just in case whomever is the prime minister of New Zealand in w is a member of the National Party in some possible world. In a world w_1 in which Jenny Shipley was (re)elected, (18) will be true just in case Shipley is a member of the National Party in some possible world w' ; in a world w_2 in which Richard Prebble was elected, (18) would be true iff Prebble is a member of the National Party in some possible world w' ; and with respect to *this* world, (18) is true just in case Clark is a member of the National Party in some possible world w' (Recanati 1993, 9). In contrast, with respect to any possible world w , (17) will be true just in case Clark is a member of the National Party in some possible world w' .

1.3 Soames' revised modal argument

Recently, in the article "The Modal Argument: Wide Scope and Rigidified Descriptions" Scott Soames has offered additional reasons for concluding that neither wide-scope descriptivism nor rigidification offer a successful response to the challenge of the modal argument. As Soames acknowledges, the main motivation for proponents of the two descriptivist strategies is a desire to simultaneously explain both the behaviour of proper names in modal contexts—their apparent rigidity—and their behaviour in propositional attitude contexts—the possibility of failure of substitutivity. Because the wide-scope descriptions are the semantic content of names (i.e., sense₄) sentences with different co-

description (or whomever best satisfies the associated cluster of descriptions), and that this description (cluster of descriptions) is the semantic content of the term, then this assumption seems in order.

designative names will have different semantic contents, and if the object of the propositional attitudes is identified with these semantic contents then substitution failure in such contexts is explained.⁵ Accordingly, his strategy is to show that for each strategy one of the desideratum is not met.

Soames reconstructs Kripke's argument as follows:

- (i) Proper names are rigid designators.
- (ii) Therefore, proper names do not have the same meanings as non-rigid descriptions. So, if *N* is a proper name, and *D* is a non-rigid description, then the sentences *N is F* and *D is F* typically do not have the same meaning, or express the same proposition.
- (iii) Since the descriptions commonly associated with names by speakers are non-rigid, typically the meanings of names are not given by those descriptions. So, if *N* is a name and *D* is a description associated with *N* by speakers, then the sentences *N is F* and *D is F* typically do not have the same meaning, or express the same proposition (Soames 1998, 2).

Soames suggests that our *prima facie* reason for accepting the first premise of the modal argument—that names are rigid designators—is our endorsement of the principle (GR) (in this case for the name 'Aristotle').

GR. There is a certain individual *x*, such that for every possible world *w*, the proposition that Aristotle was a philosopher is true at *w* iff *x* was a philosopher at *w*, ... and so on for other propositions expressed using the name 'Aristotle'.

On the view which analyses proper names as wide scope descriptions, our inclination to endorse (GR) is explained in terms of a simulated rigidity principle (SR i). We replace the name 'Aristotle' with a non-rigid description, 'the *G*', which picks out Aristotle in the actual world, and which is required to take wide scope over all modal predicates, operators, and quantifiers in the same sentence.

⁵ This may be accomplished by treating names as referring to their semantic content in propositional attitude contexts (i.e., by identifying the description as sense_s) or by treating the attitude as sensitive to the semantic content of the sentence following the 'that'. For our purposes these are merely notational variants.

(SR i) There is a certain individual x , such that for every possible world w , the proposition that the G was a philosopher is true at w iff x was a philosopher at w , ... and so on for other propositions expressed using the name 'Aristotle'.

Soames gives the content of (SR i) more explicitly in (SR ii).

(SR ii) [the y : Gy] (there is a certain individual x , such that for every possible world w , the proposition that y was a philosopher is true at w iff x was a philosopher at w , ... and so on for other propositions expressed using the name 'Aristotle'.)

On this account then, (GR) is true because (SR ii) is, and not because the name 'Aristotle' is a rigid designator. As described, this strategy works by denying the first premise of the modal argument, and providing an alternate explanation for the apparent rigidity of proper names.

1.3.1 The basic argument against wide-scope descriptivism

Soames' basic argument against the wide-scope analysis is as follows. He presents us with the following argument:

- (P1) The proposition that if n is F , then something is both F and G = the proposition that if the G is F , then something is both F and G .
- (P2) The proposition that if the G is F , then something is both F and G is a necessary truth.
 \Box (the x : Gx) [$Fx \rightarrow \exists y (Fy \ \& \ Gy)$]
- (C) The proposition that if n is F , then something is both F and G is a necessary truth.
 $\Box [Fn \rightarrow \exists y (Fy \ \& \ Gy)]$

This argument, argues Soames, is valid, having the grammatical form (I).

- (I)
- (i) $a = b$
 - (ii) a is a necessary truth
 - (iii) b is a necessary truth

The problem, as he sees it, for the wide-scope analysis is that on its account (C) is equivalent to (C').

(C') The G is such that the proposition that if it is F , then something is both F and G is a necessary truth.

(the x : Gx) \Box [$Fx \rightarrow \exists y (Fy \ \& \ Gy)$]

Since the wide-scope analysis gives takes n to be equivalent to a description, the G , which is given wide scope over any modal operators in sentences in which it occurs, it must read (C) as (C'), and (C') may well be false (when G is not an essential property of the thing in question). Therefore it must characterize the argument in question as invalid.

Soames' correctly assumes that traditional wide-scope descriptivism is without question committed to the truth of (P1).⁶ His precise statement of the view is that where n is a name, $S(n)$ a sentence containing an occurrence of n , d is a description, and $S(d)$ the result of substituting an occurrence of d for each occurrence of n , wide-scope descriptivism holds that:

the proposition expressed by $S(n)$ is the proposition expressed by $S(d)$, on an interpretation in which each occurrence of d (that replaces an original occurrence of n in $S(n)$) is given wide scope over every modal operator, modal predicate, and modal quantifier in $S(x)$, except those for which doing this would involve removing d from the scope of some propositional attitude verb (Soames 1998, 5)

Soames is careful to note that he is assuming no particular theoretical account of propositions. Rather, he assumes merely that propositions are expressed by sentences, bear truth values, and are the objects of attitudes. For his purposes in the paper under discussion then, *propositions* is just a name for those things, which he takes to be one of the pre-theoretical commitments of every day speech (Soames 1998, 5). Whether or not propositions are a commitment of pre-theoretical speech, the notion there is something which is expressed by a sentence and that what is contributed by name to whatever is expressed by a sentence and bears a truth value (sense₄) is a description is a commitment of standard descriptivist views. However, this does bring attention to the fact that this version of Soames argument rests on the assumption that

⁶ For a non-traditional version of the view that is immune to Soames' argument, although not without its own difficulties, see Chapter 6.

the content attributed to proper names can be captured by definite descriptions. Some advocates of the wide-scope analysis have denied this, advocating a view on which the content of a proper name picks out the referent by means of some property or properties for which there is no synonymous description. Soames offers a variation on his basic argument designed to show that even with this modification the wide-scope analysis does not attribute the correct semantic content to sentences containing names.⁷

1.3.2 The variation

Soames begins by observing that advocates of the inexpressible descriptions view of proper names sometimes subscribe to the further "strange and desperate doctrine" that we cannot assess the modal profile of propositions expressed by sentences containing names (Soames 1998, 8). Recall that on this view we can say that '*n* is *F*' expresses a proposition, namely, the proposition that *n* is *F*. We can assess its truth and falsity. What we cannot do, according to this view, is ask about its truth and falsity in different possible worlds. If we try to do this we end up asking about the truth or falsity of sentences in which modal operators occur—sentences in which the conceptual content takes wide-scope. As Soames describes it, this changes the question:

We intended to ask about the truth value in *w* of the proposition expressed by *n* is *F*. We ended up asking about the truth value in *w* of the Russellian proposition consisting not of the descriptive content of *n* together with the property *F*, but of the individual denoted by that descriptive content in the actual world, together with the property *F* (Soames 1998, 8).

This seems a bit like damning the descriptivist for her success. The challenge set the descriptivists by the modal argument was to explain the behaviour of proper names in modal contents. On Soames account the inexpressible descriptions theory does one better. Not only does her account explain the modal behaviour of names, but it gives exactly the same account of this modal behaviour as does the Russellian, while preserving the opaqueness of propositional attitude contexts. Soames chooses to describe this situation as attempting to ask one question and instead asking another. We might equally well say that on the inexpressible

⁷ e.g. Dummett 1981, Appendix to Chapter 5.

descriptions theory questions about the truth value in w of the proposition ' n is F ' just are questions about:

the truth value of in w of the Russellian proposition consisting not of the descriptive content of n together with the property F , but of the individual denoted by that descriptive content in the actual world, together with the property F (Soames 1998, 8).

As becomes clear in the sequel however, Soames does not think the inexpressible descriptions theory supports this modal account. While we cannot, he admits, express the proposition that n is F in any other way, we can describe that proposition. It is the proposition expressed by the sentence ' n is F '. We may then go on to ask the supposedly unaskable question: What is the modal profile of the proposition expressed by ' n is F '?

Soames then exploits our ability to describe these propositions in the following argument. He asks us to consider claims (19) and (20) in light of premise (P1a).

(P1a) The proposition that n is F = the proposition expressed by the sentence ' n is F '.

(19) The proposition expressed by the sentence ' n is F ' is true at world w .

(20) The proposition that n is F is true in world w .

(P1a) is, as Soames says, undeniable. On the wide-scope analysis the name n will take wide-scope over the modal operator 'true in world w ', and thus (20) will be true just in case the individual picked out by the content associated with n in the actual world is an individual who is F at world w . However, since in (19) the phrase 'the proposition expressed by the sentence ' n is F '' is acting as a description of the semantic content, it seems that (19) must be characterized as true iff the semantic content of n picks out an individual in w who is F at w . Despite the fact that the inference from (19) and (P1a) to (20) and the one from (20) and (P1a) to (19) are valid, the wide-scope view treats them as invalid (Soames 1998, 9).

1.3.3 The argument against rigid descriptions

In section 1.2 I extended an argument of Recanati's to show that sentences in which descriptions of the form 'the actual ϕ ' occur do not have the same truth conditions as the sentences which result from substituting a co-referential proper name for the description.

Soames' argument against the view that the semantic content of names is equivalent to rigidified descriptions is targeted instead at the view that treating rigidified descriptions as the semantic content of proper names give the right results for propositional attitude contexts. In this case we hold the context fixed so that the actual world is the same throughout. Soames argues as follows (Soames 1998, 15):

(P1) It is possible to believe that Aristotle was a philosopher without believing anything about the actual world A_w . In particular, agents in other possible worlds believe that Aristotle was a philosopher without believing anything about the actual world.

(P2) Necessarily, one believes that the actual ϕ was a philosopher iff one believes something about the actual world A_w —namely that the unique ϕ in A_w is a philosopher.

(C1) It is not the case that necessarily one believes that Aristotle was a philosopher iff one believes that the actual ϕ was a philosopher.

(P3) If the content of 'Aristotle', as used in a context C, were identical to the content of 'the actual ϕ ' as used in that same context, then:

(i) the contents in C of 'Aristotle was G' and 'The actual ϕ was G' would be the same,

(ii) the propositions expressed in C by ' α believes that Aristotle was G' and ' α believes that the actual ϕ was G' would be necessarily equivalent, and

(iii) C1 would be false.

(C2) The semantic content of 'the actual ϕ ' (relative to a context) cannot be the content of the name 'Aristotle' (relative to that context).

That is, even if we hold the context in which the reference of the indexical 'actually' is to be evaluated constant, the contribution of names to the object of a propositional attitude cannot be the same as the contribution of a rigidified definite description. Since the whole motivation of the descriptionist account is to identify the semantic content of names (sense_4) with the object of the propositional attitudes (sense_5) in order to explain opacity, the descriptionist will not wish to deny that the content of the description is the object of the attitude. In short, if we

are to allow attributions of propositional attitudes to individuals in counterfactual situations (as we surely want to) we cannot identify the content of names with rigidified descriptions.⁸

2. *The naïve theory*

Millianism is the view that names are *directly referential*—that is, that the only contribution they make to the information content of sentences in which they occurs are their referents. The underlying idea is that names are *mere tags* for their referents—tags that provide no information about how the referent is conceived or what properties it might have. Defenders of what has been dubbed the *naïve view* maintain that Millianism is true, and that our intuitions regarding the substitution of co-referential terms in belief contexts are simply mistaken. This approach to the counterexamples to the direct reference view has been strongly defended by Nathan Salmon and Scott Soames. Soames and Salmon simply bite-the-bullet and accept that in each case the paired sentences express the same proposition, have the same truth conditions, and deem our intuitions to the contrary to be faulty.⁹

2.1 Pronouns and iterated substitution

Supporters of the naïve view bolster their case by pointing out that we often do allow substitution of co-referential names into propositional attitude contexts. Imagine that the logician Ruth Marcus (also known as Ruth Barcan) is attending a conference and overhears a philosopher she doesn't know saying:

(21) I believe that Ruth Barcan invented the new theory of reference.

Later, she and I are talking when he walks past, and Marcus reports to me (who knows her as Ruth Marcus) that:

⁸ Frank Jackson, a defender of rigidified descriptivism as a theory of the reference of proper names, has said in conversation that the right response for the defender of descriptivism is to simply deny that the semantic content of a sentence is the object of the propositional attitudes.

⁹ Thus the naïve view identifies both sense₄ and sense₅ with the referent of the name, and remain in principle neutral on sense₃. As we shall see, they judge sense₂ to be irrelevant to semantics proper but accord it a role in the pragmatic implicatures of utterances.

(21*) He believes that I invented the new theory of reference.

Later, I report to you, again while the man walks past, that:

(21**) He believes that Ruth Marcus invented the new theory of reference.

It seems, argues the naïve theorist, that in each case exactly the same information is reported—that my report is a faithful account of what our unnamed philosopher believes—even if he does not know that Ruth Barcan and Ruth Marcus are one and the same person. But if the same information is conveyed, then the same information must be associated with the names and pronouns. The simplest account of this is that they are all directly referential.

Indeed, the phenomena of pronoun substitution in attitude contexts was marshaled by Mark Richard to produce an argument known as the steamroller (1983). Richard produces a case in which our intuitions about the truth-values of various belief sentences are purported to be unreliable. In the case, *A* is talking on the telephone to *B*. *A* also sees, out of his window a phone booth which, together with its occupant, is about to be crushed by a steamroller. What *A* doesn't know is that *B* is the occupant of the phone booth. Explaining what he is seeing, *A* tells *B*:

(22) I believe that she is in danger.

There is no doubt that *A* would not affirm and furthermore would sincerely deny (26).

(23) I believe that you are in danger.

Richard argues that if we assume, as is reasonable, that (22) is true then we must also treat (23) as true, despite *A*'s denial. Suppose that *B*, seeing a man up in an office building waving his arms about in a panicked fashion, utters (24).

(24) The man watching me believes that I am in danger.

Since (22) is true, (24) is also. (We assume, for simplicity only, that *A* is the only man watching *B*.) *A* is now in a position to report what she has said from his perspective. Of course he can't do this using (24), but instead uses (25).

(25) The man watching you believes you are in danger.

Since (24) is true, (25) certainly is. Now while *A* doesn't believe it, (26) would also be true if uttered by him.

(26) I am the man watching you.

Since there is no reason to think that the position occupied by 'the man watching you' in (25) is opaque, (23) follows from (25) and (26). Since they could be truly uttered by *A*, so could (23).

Indeed similar reasoning can be applied to cases involving proper names. Consider again (21)-(21**), but suppose this time that the unnamed philosopher does not know that Ruth Barcan and Ruth Marcus are one and the same.

(21) I believe that Ruth Barcan invented the new theory of reference.

(21*) He believes that I invented the new theory of reference.

(21**) He believes that Ruth Marcus invented the new theory of reference.

If I can truly report his belief with (21**), there seems no reason to deny that he can truly utter (21***).

(21***) I believe that Ruth Marcus invented the new theory of reference.

The point of these arguments (which we shall call context-hopping arguments) is to show that we have conflicting intuitions, and that not all of them can be right. If we are to accommodate the intuition that each move in the steamroller is valid, we must deny that the intuitions about the falsity of (23) are reliable. This is exactly the approach of the naïve theorist.

2.2 Pragmatic implicatures

The main challenge for the naïve view is to explain where the intuitions come from. The common explanation is that the conversational implicatures of the different sentences are

different. For example, while (27) and (27*), have the same information content, in many contexts they pragmatically imply the truth of (28) and (28*) respectively.

(27) Hammurabi believes Hesperus is seen in the evening.

(27*) Hammurabi believes Phosphorus is seen in the evening.

(28) Hammurabi would assert the proposition that Hesperus is seen in the evening using his term 'Hesperus'.

(28*) Hammurabi would assert the proposition that Hesperus is seen in the evening using his term 'Phosphorus'.

It is, claims the advocate of the naive view, the falsity of (28*), not that of (27*) that drives our intuition that (27*) differs in truth value from (27).

Neither Soames or Salmon have much to say about the nature of the pragmatic implicatures involved, but they do suggest that in general what gets implicated is information about the mode of presentation by which the subject grasps the proposition believed (Soames 1987b; Salmon 1986). Salmon, who spells this view out in the most detail, claims that the binary relation of belief is in fact the existential generalization of a ternary relation *BEL*. *BEL* is a relation among believers, structured propositions, and something else (Salmon 1986, 111-113).¹⁰ The nature of the things serving as the third relatum of *BEL* is something Salmon treats as a question needing further investigation. However, whatever they are, they provide a means by which we may grasp propositions, so that *BEL* is such that:

(i) '*A* believes *p*' may be analyzed as $\exists x[A \text{ grasps } p \text{ by means of } x \ \& \ BEL(A, p, x)]$

(ii) *A* may stand in *BEL* to *p* and some *x* by means of which *A* grasps *p*, without standing in *BEL* to *p* and all *x* by means of which *A* grasps *p*.

and

(iii) '*A* withholds belief from *p*' may be analyzed as $\exists x[A \text{ grasps } p \text{ by means of } x \ \& \ \neg BEL(A, p, x)]$ (Salmon 1986, 111).

¹⁰ Salmon remains neutral on the exact nature of *BEL*, maintaining only that the naive view is committed to there being some such relation. His favoured example of such a relation is the relation of disposition to inward agreement when taken in a certain way.

Salmon's position is that since our purpose in attribution belief is to inform a hearer about how the subject stands in relation to a proposition, in cases where the subject's dispositions depend upon the way the proposition is taken we have reason to convey that information as well. However, as the predicate 'believes' is semantically inadequate for that purpose, we must do so pragmatically. The choice of the that-clause has pragmatic implications about the way in which the subject understands the proposition in question. We may deny (27*), but nevertheless the attribution in question is strictly and literally true.

3. *Neo-Fregeanism*¹¹

Some neo-Fregeans have reacted to the difficulties of descriptivism by denying that the relation between a sense and its referent need be one of satisfaction. In place of the descriptive modes of presentation criticized by Kripke and others they have offered the notion of a *de re mode of presentation* or *de re sense*. *De re* modes of presentation have three characteristic properties: first, their reference is determined relationally, rather than descriptively, second, the condition which determines their reference is truth-conditionally inert—that is, it is not one of the truth conditions of a thought containing a *de re* sense that the reference-determining condition be met—and third, they do not exist unless the referent does (i.e., they are object dependent).¹²

On this view then, the contribution of a proper name to the semantic content of a utterance in which it occurs will be a *de re* mode of presentation of the referent of the name. Since the connection between the name and the *de re* sense is not truth-conditionally relevant, the utterance will have the correct modal profile and will not be subject to the error argument. Furthermore, since the referent of the *de re* sense is determined relationally, there is adequate motivation for saying that twin-Aileen is talking about twin-Herbert rather than Herbert—only twin-Herbert is in any relation to her modes of presentation. In fact, advocates of *de re* senses are in a position to say that the sense grasped by twin-Aileen is different from the sense grasped by Aileen, since on their view senses are object-dependent and individuated in terms of their objects. The sense grasped by twin-Aileen would not exist to be grasped unless twin-Herbert did. However, since it is possible for an object to be presented to you by more than

¹¹ This entire section owes a great deal to Francois Recanati's lucid discussion (1993, esp. chapters 2, 11, and 12).

¹² See Recanati 1993, chapters 2,3,6, and 7; McDowell 1977; 1984; Evans 1981; 1982 chapter 1.

one *de re* mode of presentation, positing *de re* senses will allow the neo-Fregean to explain the failure of substitution in propositional attitude contexts in terms of a difference of semantic content between utterances differing only in which co-referential name is used. Different names can be associated with different *de re* modes of presentation.

The notion of a *de re* sense is so far somewhat obscure. Some neo-Fregeans have advocated a two-component picture on which the content of a singular term is composed of both the referent and a descriptive mode of presentation of the object.¹³ Together they form the *de re* sense and can be represented by an ordered pair, so that the propositions expressed utterances involving them are what Schiffer calls quasi-singular propositions (Schiffer 1987, 182).¹⁴ This account is strongly opposed by McDowell and Evans, who maintain that *de re* senses depend on the object for their existence and individuation without actually including it (Evans 1982; McDowell 1984; 1986). However, McDowell allows that *de re* senses can be grouped into classes:

Particular *de re* senses, each specific to its *res*, can be grouped into sorts. Different *de re* senses (modes of presentation) can present their different *res* in the same sort of way: for instance, by exploiting their perceptual presence (1984, 220).

The main difference between the two views is that while on the two-component view the descriptive mode of presentation can exist and be grasped even when the object of the *de re* sense does not, on the McDowell-Evans view there is no part of the sense that exists independently of the object. As a result the two versions will treat cases of empty names very differently. However they are similar enough that where the distinction between the two versions of neo-Fregeanism does not matter I will treat them as one view.¹⁵

¹³ e.g. Peacocke 1981 and Bach 1987a, though note that what we are calling *de re* modes of presentation are not Bach's *de re* modes of presentation but *tokens* of them. This view is opposed in McDowell 1979;1984.

¹⁴ A quasi-singular proposition is contains an ordered pair consisting of the referent and it's mode of presentation where a singular proposition would contain only the referent. The truth-conditions of such a proposition are the same as that of the corresponding singular proposition.

¹⁵ For arguments against the tenability of the McDowell-Evans view see Recanati 1993 chapters 11 and 12. One issue which he does not discuss is that the notion of *de re* sense is left utterly obscure by McDowell and Evans. McDowell, for example, says that you can express, but not state, the sense of a proper name by means of some clauses that state the referent, like "'Hesperus' stands for (denotes) Hesperus", whereas a clause like "'Hesperus' stands for (denotes) Phosphorus" would merely state the referent (McDowell 1977, 174-177). In the same article

4. *The hidden-indexical theory*

One approach to proper names that has been explored by a number of authors is to explain the behaviour of proper names in various opaque contexts by positing parts of the proposition which are not syntactically indicated but pragmatically provided.¹⁶

On, for example, Mark Crimmins' account of the semantics of the attitudes, sentences like (29) are to be understood as having unarticulated constituents (1992).

(29) Amelia believes that Lewis Carroll is an English novelist.

On Crimmins' view belief is a ternary relation between the believer (Amelia), the proposition believed (Lewis Carroll is an English novelist), and a mental representation, and so (29) does not express a complete proposition (*certus paribus* for other propositional attitudes). Just as the sentence

(30) It is raining.

does not express a proposition unless completed by a contextually supplied place and time, (29) must be completed by a contextually supplied mental representation. The question, then, is how is it supplied. In the case of (30) the unarticulated constituents are usually the place and time of the utterance, so that (30) is correctly read as:

(30') It is raining {here} {now}.

However this is not always the case. We could well imagine the weather forecaster saying "And now to tomorrow's weather in Perth. It's raining." In this case (30) is properly completed as:

he notes that this theory of sense does not explain but merely reflects failures of substitution (McDowell 1977, 190-191), all of which leaves the notion even more obscure.

¹⁶ A version of the hidden-indexical theory was first advanced in this century by Shiffer (1977). A version of it is also offered in Richard 1990.

(30'') It's raining {in Perth} {tomorrow}.

Crimmins' proposal is that in attributions like (29) the words used to express the proposition are pragmatically involved in specifying the unarticulated mental representation—though their force may be modified by other contextual features, just as (30'), the default reading, can be transformed into (30''). On this view, then the correct account of (29) is (29') (where ϕ is contextually supplied).

(29') Amelia believes that Lewis Carroll is an English novelist {via a mental representation ϕ }.

By itself this doesn't tell us much. What is ϕ ? On Crimmins view, a mental representation is composed of the concrete cognitive particulars, since on his view what is reported are not ways of believing but particular instances of believing (Crimmins 1992, 35-53). Thus belief ascriptions involving a proper name NN claim that there is a particular notion of the referent of NN involved in the believer's mental representation. Other versions of the hidden-indexical theory (HIT), such as that offered by Richard (1990), instead claim that the unarticulated element is something more abstract. What the accounts have in common is that they explain the relationship between the words used in the belief ascription and the nature of the unarticulated element in terms of a contextually provided mapping.

Consider an example where you and I are discussing Amelia's performance on an exam which asks "Was Lewis Carroll English?". I might utter (29) in order to convey that she will answer that question correctly. This means that whatever unarticulated element is operative must be one that Amelia associates with the name 'Lewis Carroll'. If, on the other hand, I am discussing Amelia's adoration of the gentleman whose painting is over my desk, but Amelia does not know that this is a painting of Carroll at all (in fact she thinks Lewis Carroll is an American poet), the relevant unarticulated element will be that she has associated with the picture, and not those associated with the name 'Lewis Carroll'. (For simplicity's sake I am concentrating on the unarticulated element associated with Lewis Carroll, and ignoring those connected with being English and being an novelist.)

There are a few important points to note about HIT. First of all, supporters of hidden-indexical views of the type outlined above subscribe to a Millian account of names. That is,

they think the semantic content of the name is exhausted by its referent. Secondly, they subscribe to what is sometimes known as the principle of semantic innocence.

Semantic innocence (SI):

Embedding an expression in a propositional attitude construction does not change the meaning or reference of the expression.

SI is maintained because the hidden-indexical view distinguishes carefully between the following two principles of direct reference (Crimmins 1992, 11).

Direct reference (DR):

The semantic content of a use of a name in any statement is the object it denotes.

Direct contribution (DC):

The contribution to the semantic content of a statement *traceable* to the use of a name is simply the object it denotes.

Hidden-indexical views endorse DR but not DC. The mode of presentation ϕ in (29') is traceable (via pragmatic reasoning) to the use of the name 'Lewis Carroll'.

(29') Amelia believes that Lewis Carroll is an English novelist {via a mental representation ϕ }.

Similarly, the time and place specifications of (30') are traceable to the fact that (30) was uttered on a particular morning.

(30) It is raining.

(30') It is raining {here} {now}.

Nevertheless, we should not conclude that any part of the mode of presentation ϕ is part of the semantic content of the name 'Lewis Carroll', anymore than we would conclude that the fact that an utterance of (30) was made on a particular day and at a particular place has the semantic content of the indexicals 'here' and 'now'. No doubt the reason we are tempted by the

first conclusion and not the second is because names, but not facts, are the right sorts of things to have semantic content.

Accordingly, defenders of the hidden-indexical theory are in agreement with defenders of the naïve theory about the behaviour of proper names outside propositional attitude contexts. Furthermore, since Salmon and Soames have also claimed that the relationship between a believer and the proposition believed is in fact a three-way one mediated by some mode of presentation, the two views are largely in agreement about the cognitive facts. They disagree solely over whether a specification of the third element in the cognitive relation referred to by 'believe' is part of ordinary attitude ascriptions.

5. *Neo-Fregean HIT*

Both *HIT* and the naïve theory advocate the thesis of direct reference—this is what makes them neo-Russellian rather than neo-Fregean theories. However, Graeme Forbes advocates a version of neo-Fregeanism that is similar to the hidden-indexical theory (Forbes 1990; 1993; 1996; 1997).

Forbes' view is that we associate *de re* senses with proper names in connection with mental dossiers of information about an object. When we take a name *NN* to stand for a particular object we label the dossier concerned with that object with *NN*. The cognitive significance of the *de re* sense of the name is then captured by the description 'the subject of this dossier', where the dossier picked out by 'this' is of course the one labeled *NN*.¹⁷ Despite this, Forbes does not take the Fregean view that in the context of a propositional attitude a name refers to its usual sense. Instead, it assimilates belief ascriptions to Quine's classic Giorgione example: Giorgione is so-called because of his size, Giorgione is Barbarelli, but it is false that Barbarelli is so-called because of his size. Substitution fails in this case because the logophor 'so-called' refers to the word 'Giorgione', even though 'Giorgione' itself has its usual reference. Forbes position is that in an attitude ascription there is an implicit logophor, so that (29) is correctly expanded as (31) which is in turn interpreted by (32).

¹⁷ The description captures the cognitive significance of the sense of the name, but in Forbes view is *not* the sense. He says that "the sense of a description may *encapsulate* the sense of a singular term without there being any literal *sameness* of the sense of the senses of the description and the term. This would happen when the sense of the description is structured and the sense unstructured" (Forbes 1990, 537). However, capturing the cognitive significance of the sense as it is cognitive significance which affects belief and other attitudes (Forbes 1990, 537-539).

(29) Amelia believes that Lewis Carroll is an English novelist.

(31) Amelia believes *that Lewis Carroll is an English novelist*, so-labeled.

(32) The abstract situation of Lewis Carroll being an English novelist is such that Amelia believes her so-labeled way of thinking about it.

An abstract situation is simply a singular proposition (Forbes 1997, 110). Ways of thinking of such propositions are of course senses or modes of presentation. Accordingly, we can set aside the Amelia's ways of thinking about the property of being an English novelist in order to focus on the proper name by representing (29) via (33). Where S is a meaningful expression $/S/$ is the sense of that expression, and $'\wedge'$ conecates senses such that where the sequence SS' is a meaningful expression, $\text{Sense}(S)\wedge\text{Sense}(S')$ is the sense of the sequence SS' .

(33) Lewis Carroll is such that for Amelia's so-labeled way of thinking of him α , Amelia believes $\alpha\wedge$ is an English novelist/.

A sense is so-labeled by a name NN just in case NN is a *linguistic counterpart* of the name the believer uses to label the dossier associated with α . The linguistic counterpart relation, like the mapping involved in Crimmins' account, is determined by features of the context.

6. *The indexical theory of names*

The indexical view of names is defended by Francois Recanati as part of an attempt to combine the intuitions about referentiality and cognitive significance which motivate the naïve and neo-Fregean views, respectively. There are, he argues, two essential intuitions about the nature of referential terms which must be respected by any account of indexicals and proper names (Recanati 1993, 38-39). The first intuition concerns what is required to understand a referential term:

Intuition one: Where t is a referential term, a hearer does not understand what is said by an utterance of $G(t)$ unless she can *identify* the referent of t .

In order to identify the reference, in the sense Recanati has in mind, you have to be able to equate what is picked out by the descriptive content of the term with an object about which you have independent information. For example, if I utter "He is a spy", you do not understand what I have said if you do not go beyond the descriptive content (which perhaps can be captured by: a salient male) and identify the referent as the man you see across the room, or the man you saw when he passed us in the stairwell, or John who we both work with. Likewise, you cannot understand an utterance of "I am in Australia" merely by knowing that "I" refers to the speaker—you must, in addition, know who the speaker is. This, on Recanati's view, is one of the essential contrasts between referential terms and definite descriptions. You can understand an utterance of "The Governor General of Canada was born in Hong Kong" without having any idea who Canada's Governor General is.

The second intuition about referential terms is more familiar—it concerns the truth-conditions of utterances containing them.

Intuition two: Where t is a referential term, any mode of presentation which is part of the linguistic meaning of t is not part of the semantic content expressed by an utterance containing t . This is because the referent of t satisfying the mode of presentation is *not* part of the truth-conditions of such an utterance.

For example, according to this intuition, if I utter "You are in Australia" to Martin, my utterance is true if and only if *Martin* is in Australia. That Martin is the addressee is not part of the truth conditions of my utterance. It is this intuition which is brought to our attention by the modal and error arguments and by the context hopping examples.

If we attempt give an account of indexicals that respects these intuitions, we will see that their linguistic meaning has an undeniable descriptive component. For example, 'I' refers to the speaker, 'you' to the addressee, and so on. Indexicals have what Recanati dubs a *linguistic mode of presentation*, which helps the hearer identify the reference—that is, the linguistic mode of presentation facilitates the identification that intuition one suggests is necessary for understanding an utterance containing a referential term. Nonetheless, if we are to respect intuition two, we cannot treat this mode of presentation as part of the semantic content of utterances containing indexicals. Indexicals have the distinctive feature that aspects of their linguistic meaning have the role of identifying their referent but do not enter into the truth conditions of the propositions expressed by utterances involving them. We can understand this, Recanati suggests, if we notice that indexicals not only present their referent

as satisfying their associated mode of presentation, but also *present that satisfaction as incidental* (Recanati 1993, 26-31).

We can see that indexicals must have this feature, argues Recanati, if we reflect on the nature of referentiality. Particular uses of proper names and indexicals are, as we have observed earlier, rigid designators—they refer to the same thing in every possible world. They are not the only rigid designators, however. Descriptions such as 'the cube root of 27', 'the even prime', and 'the actual teacher of Alexander' are also rigid designators. They all satisfy the definition of rigidity put forward by Christopher Peacocke (1975, 110):

t is a rigid designator (in a language *L* free of both ambiguity and indexicals) if and only if:

there is an object *x* such that for any sentence *G(t)* in which *t* occurs, the truth (falsity) condition for *G(t)* is that *<x>* satisfy (respectively, fail to satisfy) *G*().

In this paper Peacocke takes his definition of rigid designation to capture the essential feature of proper names gestured to by Mill's idea of a mere tag, but Recanati argues that equating rigid designation with referentiality is a mistake (Recanati 1993, 11-12). As noted above, many descriptions are rigid designators as defined by Peacocke. Nevertheless, the link between the description and its reference is still what Kripke calls a 'qualitative' one. The description 'the cube root of 27' refers to 3 because 3 *has the property* of being the cube root of 27. Its rigidity is in some sense a matter of accident—it is, as Recanati puts it, rigid *de facto* rather than *de jure*.

If referentiality is not captured by rigidity, how are we to define it? Recanati looks to the idea captured by intuition one above. The reason why 'the cube root of 27' is not referential is because we can understand an utterance containing it without knowing that it refers to 3—and for that matter, without consciously realizing that it refers rigidly. In contrast, suggests Recanati, understanding a utterance containing a referential term requires identifying the referent of that term (Recanati 1993, 15). It is this feature of referentiality which leads philosophers to think that an utterance containing a referential term without a reference fails to express a proposition at all. However, the very notion of a referential term without a reference requires Recanati to offer a definition of what it means for a term to be of the referential type:

A term is (type-)referential if and only if its linguistic meaning includes a feature, call it 'REF' by virtue of which it indicates that the truth-condition (or, more generally, satisfaction-condition) of the utterance where it occurs is singular (Recanati 1993, 17).

Of course, as reflection on the linguistic meaning of indexicals shows, referential terms may have a mode of presentation as part of their linguistic meaning. Accordingly, where t is a referential term with a linguistic mode of presentation, $G(t)$ indicates that:

There is an object x which is F (=mode of presentation), such that the utterance is satisfied if and only if x satisfies $G()$ (Recanati 1993, 18).

It is in this sense that indexicals present the satisfaction of the descriptive portion of their linguistic meaning as incidental to the truth conditions of the utterance. An utterance of 'I am in Canberra' indicates that there is an x such that x is the speaker of the utterance, and that the utterance is true iff x is in Canberra. the mode of presentation makes the referent contextually identifiable and REF ensures that the truth conditions are singular.

6.1 The indexical view

It is often said that proper names have no character or linguistic meaning, or at least no meaning beyond their references. The motivation of such claims is the contrast between proper names and common nouns, or proper names and indexicals. In order to be a chair an object must possess certain properties, and in order to be the reference of a particular utterance of 'you', I must be the addressee of that utterance. In contrast, I may bestow a proper name on whatever object I like. Recanati cannot accept that names have *no* linguistic meaning, for as referential terms they must at least convey the feature REF. The closest he can come to accepting the view that names have no linguistic meaning is to accept (A) (Recanati 1993, 137):

(A) The meaning of a proper name is nothing over and beyond REF. By virtue of its meaning, a proper name NN indicates that there is an x such that an utterance $S(NN)$ is true iff x satisfies $S()$, but it does not present this entity in a particular way. Hence a proper name has no 'meaning' in the sense of a (linguistic) mode of presentation of the reference.

One serious problem with (A), however, is that according to it all names are equivalent in that they serve only to indicate the speakers referential intention (Recanati 1993, 137). But this cannot be right—it does make a difference, as Recanati points out, whether I use the name Cicero, or Aristotle, or Arthur. Utterances of 'Cicero was bald' and 'Aristotle was bald' are importantly different. There are conventions associating proper names with particular individuals (often with more than one). While knowledge of who is conventionally associated with each name is not required for linguistic competency, knowledge that there are such conventions surely is. Someone who does not know that a use of 'Cicero' can refer only to things with which it is conventionally associated is importantly ignorant about the grammatical category of proper names. It is the realization that such knowledge is required that is captured by the metalinguistic view that a proper name NN means 'the thing called NN'.

This insight can be accommodated, argues Recanati, when we see the parallels between indexicals and proper names. In the case of indexicals the linguistic meaning provides a clue to identifying the referent as well as the information that the satisfaction-conditions are singular. We capture what is correct about both the metalinguistic and the directly referential views by recognizing that the linguistic meaning of proper names also plays this dual function. In virtue of having the feature REF, proper names indicate that the satisfaction-conditions of utterances in which it occurs are singular. In addition, a proper name provides a clue to identifying the reference—namely, that the referent is associated with the name in question by a social convention. On the indexical view then:

a proper name NN occurring in an utterance 'NN is G' indicates that there is an entity x, called NN (linguistic mode of presentation), such that the utterance is true iff x is G (Recanati 1993, 140).

Metalinguistic views are sometimes criticized as viciously circular, so it is important to note that Recanati's view does not suffer from this flaw. It would be circular *if* the linguistic mode of presentation—called NN—claimed that the object bore this particular token of NN. This would identify as the reference of a particular token NN whatever is the reference of that token, and provide no help in identifying the object in question at all. However, on Recanati's view the linguistic mode of presentation identifies the reference of a particular token of NN as an object conventionally bearing the name *type* NN.

It is this feature of the indexical view which gives it the virtue of providing a better account of names born by multiple bearers than any of its competitors. The examples given to illustrate Recanati's view of indexicals were all of indexicals strictly speaking. However, the account also applies to indexicals construed broadly—i.e., to demonstratives and demonstrative phrases. For example, an utterance of 'that is *G*' indicates that there is an entity *x*, which is the contextually salient object some contextually determined distance away (linguistic mode of presentation), such that the utterance is true iff *x* is *G*. Similarly, an utterance of 'this cup is *G*' indicates that there is an entity *x*, which is the contextually salient cup within a certain contextually determined range of the speaker (linguistic mode of presentation), such that the utterance is true iff *x* is *G*. As we can see, the linguistic meaning of these utterances requires among other things, that the hearer determine which object is the contextually salient one. According to Recanati, this same pragmatic process is at work in names. The hearer is required to identify the referent, and is guided by the linguistic mode of presentation—it is an object called NN. Where there are multiple objects called NN, the referent is the contextually salient object. This allows Recanati to avoid the unparsimonious view that when two objects apparently share a name there are in fact two discrete word-types,¹⁸ which happen to be homonyms, and have an easy explanation of the naturalness with which names are transformed into predicates: 'He doesn't look like a Fred'; 'The Saras went out together'.

6.2 Thoughts

I said earlier that Recanati's view attempts to combine naive direct reference with the insights of the metalinguistic view and that of the neo-Fregean. So far, however, the indexical view does not seem to capture the neo-Fregean claim that co-referential names can have different cognitive significance. In particular, since the truth conditions of utterances containing names are singular, it seems that (32) and (33) and the like will still have the same truth conditions.

(32) Linda believes that Mark Twain was an American novelist.

¹⁸ Indeed, if one wishes to treat names as indexicals rather than like indexicals, Recanati's view is compatible with claiming that there is a single abstract indexical—PN—which corresponds to all proper names and has the meaning: an instance of PN refers to the bearer of that instance (1993, 142).

(33) Linda believes that Samuel Clemens was an American novelist.

To understand Recanati's solution, we must recall the first intuition about referential terms: where t is a referential term, a hearer does not understand what is said by an utterance of $G(t)$ unless she can *identify* the referent of t . This is reflected in the fact that referential terms present the satisfaction-conditions of utterances in which they occur as singular. However, we cannot recognize a singular proposition except under some mode of presentation or other. That is, the cognitive content of an utterance—the *thought* I think when I correctly understand it, must involve some way of thinking of the referent of the singular term. Even Salmon and Soames, defending the naive view, acknowledge that we cannot think about singular propositions except under some mode of presentation (Salmon 1986, 111). Recanati endorses the neo-Fregean view that thoughts with singular truth conditions are those in which we think about objects by means of *de re* modes of presentation.

The complete thought expressed by an utterance has frequently been distinguished from the truth-conditional content of the thought.¹⁹ This is, for example, the import of Perry's distinction between his thinking 'I am making a mess' and his thinking 'John Perry is making a mess'. In both cases he believes the same thing, but he does it in virtue of being in different belief states (Perry 1979, 47-49). Thus there seems to be a distinction between 'narrow content' (Perry's belief state or role) and the truth-conditional content of the thought, and this distinction parallels that between the linguistic meaning of a utterance and its semantic content. There will thus be four entities associated with a given utterance (Recanati 1993, 65-66):

- (a) the linguistic meaning of the sentence
- (b) the semantic content of the utterance
- (c) the truth-conditional content of the thought
- (d) the narrow content of the thought

On Recanati's view it is characteristic of literal communication that (b) and (c) can be equated—the semantic content of an utterance is the truth-conditional content of the thought. It may then seem natural to identify (a) and (d), and this identification can be found Perry and

¹⁹ Even McDowell and Evans can do this, though of course on their view the word content is a misnomer—what is being discussed are just the truth-conditions of the thought.

also in Kaplan's treatment of the notion of character (Perry 1977; 1979: Kaplan 1978b). Recanati's position is that this is a mistake—he argues that the linguistic meaning of a sentence cannot be identified with the narrow content.

6.3 Linguistic modes of presentation versus psychological modes of presentation

As we have seen, Recanati's treatment of indexicals and names sees their linguistic meaning as including linguistic modes of presentation (LMPs)—clues to the identification of the referent. He ascribes these modes of presentation the following properties (1993, 69).

(L1) They are conventionally determined by the rules of the language.

(L2) As a consequence of (L1), LMPs are constant. A word with a LMP has the same LMP in every context.

(L3) In the case of indexicals, the LMP specifies a relationship between the token and the referent (e.g., the utterer of this token, the time at which the token is uttered). They are token-reflexive.

The mode of presentation that is involved in the propositional attitudes cannot be one which meets (L1)-(L3). To see why, Recanati asks us to consider Kaplan's case where I see a reflected image of someone whose pants are on fire in the window, but do not realize that the person in question is me. I say: 'Her pants are on fire' and I entertain the belief that that woman's pants are on fire. Perhaps I look around to see where she is to help, or perhaps I laugh, but when I realize that that woman is me my behaviour changes. I might shout 'My pants are on fire', and I almost certainly start doing something to put them out. Can this be explained by positing a relationship between me and the linguistic mode of presentation associated with 'I'?

I do not think so. ... I might possibly believe that the pants of the person who utters T [a particular token of 'I'] are on fire, without realizing that I am the person who utters T, and therefore without behaving as I do when I realize that *my* pants are on fire. ... This shows that the psychological mode of presentation that occurs in my belief that my pants are on fire ... differs from the linguistic mode of presentation associated with the word 'I'. ... Yet, if we turn from the thought expressed by the utterance to the linguistic meaning, we have no reason to deny that the reference of 'I' is presented as

being the speaker, ... All this poses no problem if we accept that the mode of presentation of the reference in the thought (psychological mode of presentation) is different in principle from the mode of presentation of the reference at the level of linguistic meaning (linguistic mode of presentation) (Recanati 1993, 71-72)

Psychological modes of presentation (PMPs) do not on Recanati's view possess any of the three characteristics of LMPs (1991, 72-76). The PMPs associated with indexicals are certainly not token reflexive, as is called for by (L3). The way in which I think of myself, or now, or here, is inherently subjective, but the relationships specified by (L3) are objective relationships between the token and the referent of the token. Given any objective description of myself I can fail to know that I satisfy the description, as pointed out in the passage above. PMPs also fail to meet (L2). When I utter 'My pants are on fire' I think of *myself*—i.e., I use a first-person mode of presentation. In contrast, when you hear me utter 'My pants are on fire' you do not use a first-person PMP. But in both cases the LMP is the same—'the speaker' (1993, 73-75). Recanati concludes that the failure of (L2) implies a failure of (L1) for PMPs, though of course this is not to deny that there is *some* correlation between PMPs and the words of natural language.

6.4 Attitude ascriptions

Given the distinction between the linguistic meaning of an utterance, its semantic content, and the thought expressed by the utterance, Recanati offers the following account of attitude ascriptions. In an attitude ascription the *that*-clause refers to the content of the ascribed belief. However, the relationship between the embedded sentence of the *that*-clause and the referent is not just context dependent, like the reference of 'I' or 'now', but fundamentally *underdetermined*, like the reference of a demonstrative pronoun such as 'that man' or 'this'. That is there is no rule or 'character' which, given the context, determines what the reference is. Instead, Recanati proposes that the reference of the *that* clause is determined contextually but constrained in two ways (Recanati 1993, 355-56):

- (i) the *top-down* constraint: the reference must be a plausible candidate for the status of content of the ascribed belief (more generally: for the status of argument for whatever predicate is involved in the sentence).

- (ii) the *bottom-up* constraint: the reference must be recoverable from the embedded sentence, i.e., it must be possible and easy to reach a content satisfying constraint (i) by 'interpreting' the embedded sentence.

The important process in the context of attitude ascriptions involving names is enrichment from the singular proposition that is the semantic content of the embedded sentence to the quasi-singular proposition that is an appropriate object of belief. This enrichment will of course be guided by the relationships between the linguistic modes of presentation associated with the singular terms and the psychological modes of presentation discussed above.

7. *The common ground of contemporary semantics of names*

Part of the common ground for advocates of the contemporary accounts of names is, as noted above, commitment to the idea that names are rigid designators, a view which is one of the central claims of what has become known as the new theory of reference. They are also agreed that in the truth-conditions of simple sentences that do not include any attitude verbs are singular. That is, even on neo-Fregean views according to which the proposition expressed by a singular sentence like (34) contains a *de re* mode of presentation of Samuel Clemens, (34) is true just in case the individual Clemens is an American writer.

(34) Samuel Clemens is an American writer.

Finally, while the accounts discussed above differ considerably over the correct implementation of this idea and its role in the semantics of propositional attitude ascriptions, they do agree that attitudes towards propositions must involve modes of presentation or ways of thinking of a proposition, and that information about those modes of presentation is at least sometimes part of what is communicated by an attitude ascription. In the next chapter I introduce some counterexamples that suggest that these shared assumptions are largely incorrect.

CHAPTER THREE

The counterexamples

The various treatments of names and the puzzles of informativeness and the propositional attitudes introduced in the previous chapter all face known difficulties and objections.¹ I shall not discuss them all here. Instead I want to focus on a collection of recently introduced examples of utterances that none of the contemporary theories introduced above can accommodate.

I begin with discussion of a puzzle about the attitudes, due to Jennifer Saul, that presents roughly the same difficulty for every theory. This puzzle is particularly pernicious in that even on the assumption that co-referential proper names cannot be substituted in attitude contexts it is very difficult to explain the truth-conditions of the puzzle sentence. I then move away from the traditional attitude puzzles to discuss and elaborate on two groups of simple sentences that exhibit opacity with respect to co-referential proper names. I discuss attempts to accommodate these intuitions offered by Graeme Forbes and Joseph Moore and argue that neither of the accounts work. Both accounts depend on a distinction between enlightened and unenlightened utterances of the sentences and only explain substitution failure in the enlightened cases. The problem with this is that our anti-substitution intuitions also extend to the unenlightened contexts. As a result, any view that exploits such a distinction will have to provide a separate account of the source of the intuitions about unenlightened contexts.

¹ For objections to the naïve view see Chapter 7: Crimmins 1992, 1-34 (esp 33-34); Richard 1990 125-128. For objections to neo-Fregeanism see Richard 1990, 61-85; Recanati 1993, 63-77 (The essence of Recanati's objection is discussed in section 6.3 of Chapter 2.). For objections to Russellian HIT in general see Oppy 1992. For objections to Richard's version of HIT see Crimmins 1992, chapter 2; Soames 1995. For objections to Crimmins' version of HIT see Bach 1993a. For objections to neo-Fregean HIT see Crimmins 1993; Richard 1993. For objections to the indexical theory of names see Wilson 1995. For objections to Russellian views in general see Recanati 1993, chapters 8 and 9.

I then argue that any semantic theory must treat the traditional cases of attitude ascription and the simple sentences (in both enlightened and unenlightened varieties) as on a par with each other. However, the difficulties faced by Forbes and Moore will arise for all the varieties of neo-Fregeanism, all the hidden-indexical views, and also for Recanati's indexical account of names. I conclude that the naïve view has the advantage, since it treats all of the intuitions in question as reflecting pragmatic features of the utterances rather than the semantic content encoded by them.

1. *Attitude trouble for everybody*

In a series of recent papers Jennifer Saul has raised some difficulties for various views of how propositional attitude ascriptions interact with proper names (1998: 1999a: 1999b). A central case in her argument is that of Lydia, the beginning philosophy of language student. Lydia finds her first class very confusing, but does take herself to have learned something about the history of astronomy. She returns from her first class to report to her friend Martina what she has learned by uttering (1).

(1) No ancient astronomers believed that Hesperus is Phosphorus.

Neither Lydia nor Martina know very much about history, and they assume that the ancient astronomers used the names 'Hesperus' and 'Phosphorus'.² Nevertheless, Lydia has learnt that Hesperus and Phosphorus are co-referential. Consequently she knows that there is something crucial about how the astronomers held their beliefs, and she conveys this to Martina.

The question that Saul raises is: what situations would Lydia and Martina count as counterexamples to her claim? It seems clear, given their knowledge of the co-referentiality of the terms and their belief that Lydia has said something true, that neither Lydia nor Martina would count ancient astronomer's beliefs in the self-identity of Venus as a counterexample. However it seems that they would count the ancient Babylonians, who had made the requisite discovery, as a counterexample. This is so despite the fact that the Babylonians would have expressed their belief by means of a sentence in Akkadian, which, while correctly translated as 'Hesperus is Phosphorus', does not use the names in question.

² Either because they think that the ancient astronomers all spoke English, or because they think that 'Hesperus' and 'Phosphorus' are not English words but words in the single language spoken by all the ancient astronomers.

The Babylonians are not the only candidate counterexamples however. Suppose that there was an ancient astronomer whose language lacked translations for 'Hesperus' and 'Phosphorus'—perhaps because the language had no names at all for heavenly bodies. Nevertheless, this astronomer could make the discovery we would intuitively describe as the discovery that Hesperus is Phosphorus—that is, the astronomer could discover the astronomical facts, and express them by means of drawings, or by means of utterances that translate to 'the first heavenly body I see in the evening is the same as the last heavenly body I see in the morning'. Both Lydia and Martina would count this astronomer as a counterexample, even if they did not know about the associations between the names 'Hesperus' and 'Phosphorus' and evening and morning appearances, respectively.

Finally, suppose that there was another astronomer in a culture whose language does not include names for heavenly bodies, but that this astronomer did purely theoretical work based on charts of the seasonal cycles of heavenly bodies that were prepared by others. This astronomer made a discovery that she would express by uttering a sentence which translates as 'the heavenly body taken to have this cycle (indicating one chart) is the same as the heavenly body taken to have that cycle (indicating a second chart)'. Since the heavenly body in question is Venus, she would intuitively be counted as a counterexample to Lydia's claim, even though she had no idea that one cycle was associated with morning appearance and one with evening appearances, and even though Lydia and Martina, who don't know about the associations between the names and times of day, certainly don't know that the morning appearances and evening appearances occur at different times of the year. What is needed therefore is an account of Lydia's utterance that counts all three astronomers as counterexamples without counting beliefs in the self-identity of Venus as counterexamples.

1.1 The naïve view

Recall that Salmon's proposal in *Frege's Puzzle* was that the predicate 'believes' picks out the existential generalization of a ternary relationship between a proposition, a believer, and something by means of which we may grasp propositions, which we will call a *guise*. The relation between belief ascriptions and *BEL* is as follows:

- (i) '*A* believes *p*' may be analyzed as $\exists x[A \text{ grasps } p \text{ by means of } x \ \& \ BEL(A, p, x)]$
- (ii) *A* may stand in *BEL* to *p* and some *x* by means of which *A* grasps *p*, without standing in *BEL* to *p* and all *x* by means of which *A* grasps *p*.

and

(iii) '*A* withholds belief from *p*' may be analyzed as $\exists x[A \text{ grasps } p \text{ by means of } x \ \& \ \neg BEL(A, p, x)]$ (Salmon 1986, 111).

The explanation of our belief ascription practices is twofold. First, belief ascriptions carry pragmatically provided information about the guise under which the proposition is believed. Soames suggests that there is a pragmatic principle to the effect of: stay as close to the words of the agent as is possible (Soames 1987b, 117-119). This is justified by the observation that information about how something is believed is often just as (if not more) important for the prediction of behaviour than information about what is believed, and there is a general pragmatic requirement that cooperative speakers give as much information as is required. Accordingly Salmon and Soames suggest that an utterance of (2) will generally convey something like (2*).

(2) Lois believes that Clark can fly.

(2*) Lois believes that Clark can fly under a guise like 'Clark can fly'.³

Since (2*) is false, (2) appears false also.

Second, we regularly affirm sentences like (3) because we mistake not believing for withholding belief, as characterized by (iii).

(3) Lois doesn't believe that Clark can fly.

Thus we read (3) as (3*), which is of course true.

(3*) Lois withholds belief from the proposition that Clark can fly under a guise like 'Clark can fly'.

The trouble with this account is that it merely tells us that what is implicated by (2) and (3) is only 'something like' (2*) and (3*), and further, that the guise in question is 'like' the sentence

³ Strictly speaking (2*) should read: Lois stands in *BEL* to the proposition that Clark can fly under a guise like 'Clark can fly'. Since there is generally no danger of confusion I will continue to use 'believes' for both the ordinary binary relation and the ternary *BEL*.

used in the belief report. However, guises are not sentences, and so the relationship requires some elucidation.

1.1.1 Lydia and the naïve view

Salmon gives a further suggestion in *Frege's Puzzle* to the effect that a belief report carries the conversational implicature that the believer understands and would verbally assent to his or her version of the sentence in question (Salmon 1986, 115). On this view then, (2) implies (2**), and (4) implies (4*).

(2**) Lois understands and would assent to 'Clark can fly'.

(4) Hammurabi believes Hesperus is seen in the evening.

(4*) Hammurabi understands and would assert his translation of the sentence 'Hesperus is seen in the evening'.

This proposal won't do however, as the Lydia example shows—neither the linguistically impoverished astronomer nor the season cycle astronomer have a translation of the sentence 'Hesperus is Phosphorus' in their language, and so there is no sentence that they understand and verbally assent to that bears the appropriate relation to the that clause used to specify the proposition.

Perhaps however the specifics of the implications of belief utterances are more particularized than the suggestion above. That is, perhaps the reason Salmon and Soames have not spelt them out is that in general there is no one thing or kind of thing that is implicated by a belief ascription. As Saul points out this seems quite plausible—"we sometimes care about what sentences the believer would assent to, we sometimes care about what the believer thinks regarding the physical appearance, or conversational charms, of those discussed in the reports, and so on" (1998, 377-378). Can a particularized proposal of this sort give the right answer for Lydia and the astronomers?

The standard Gricean account of particularized pragmatic implicatures are that they arise from the audience's assumption that the speaker is being cooperative—to be precise, that they are making their "conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange" in which they are

participants (Grice 1975, 158-9).⁴ What is implied is whatever the audience must take the speaker to believe in order to preserve this assumption. In particular, the implications that arise from (1) will be determined by the participant's judgements about what information is relevant for the conversational purposes.

It is easy to see that this approach won't work. The pragmatic account will explain why astronomers who believe in the self-identity of Venus don't count—both Lydia and Martina are aware of the importance of the use of two co-referential names in the belief ascription. However, their ignorance of both the circumstances of the introduction of the terms 'Hesperus' and 'Phosphorus' and the facts of history ensure that they cannot make judgements that will accommodate the other counterexamples. We have already seen that even on the charitable assumption that Martina takes the implication to be that no ancient astronomer would assent to their translation of 'Hesperus is Phosphorus' the linguistically impoverished and seasonal cycle astronomers are ruled out as counterexamples. And it is a charitable assumption, given her and Lydia's belief that the ancient astronomers used the terms in question.

Saul suggests that we might suppose that instead Martina takes Lydia to be trying to convey that no astronomers held the belief in question in any way associated with either the terms 'Hesperus' and 'Phosphorus' or morning and evening appearances. This is of course implausible given Lydia and Martina's shared ignorance about the origins of the terms 'Hesperus' and 'Phosphorus'. However, even this unmotivated assumption rules out the seasonal cycle astronomer (Saul 1998, 380-381), and so gives the wrong results.

1.1.2 Dispositions

In her original paper on the naïve view, Saul suggested that the answer was to exploit the dispositions of the speaker in the account (Saul 1998, 382-387). On this version the conversational implicature of a sentence of the form *A believes that S*, will be, as on the original sketch, that A believes that S under a guise similar to S, but the relation 'similar to S' will be specified in terms of speaker dispositions:

⁴ I discuss Grice's pragmatic theory and its descendents, including relevance theory, in some detail in chapter 7. While I put the points here in terms of Gricean pragmatics, this is inessential, and similar points would apply to an attempt to treat the implicatures in terms of relevance theory.

A guise counts as similar to 'S', for the purposes of a particular belief-reporting utterance, just in case the speaker would take it to be an appropriate guise for the purposes of her utterance (upon being sufficiently informed) (Saul 1998, 383).

However in later papers Saul herself has pointed out that this approach can't work. Like all dispositional accounts this approach falls down when faced with idiosyncratic agents of various kinds. In particular, the dispositional account will give the wrong results when faced with certain theoretically driven speakers. Saul offers two examples: Jon, the behaviorist, and Ethel, the naïve theorist (Saul 1999a, 44-47).

The behaviorist

Jon, the devout behaviorist, does not believe in mental representations. On the dispositional account the pragmatic implications of Jon's belief ascriptions will depend on which guises—that is, which mental representations—he takes the that-clauses in his ascriptions to be similar to. However, Jon won't take his that-clauses to be similar to any mental representations. He will never agree that a particular guise will be similar enough to falsify his utterance of (1), because he will never agree that there are any guises to be compared.

The obvious approach to Jon is to modify the theory so that the implication is put in terms of assent to utterances—a given belief attribution, *A believes that S*, will imply that A would assent to an utterance similar to S, where the relation of similarity is specified in terms of what utterances Jon would (when suitably informed) count as appropriate.⁵

Another approach is to put the theory in terms of what Jon would think if he did believe in guises—in other words, if he did believe in the basic posits of the theory of the mind underlying the naïve views' explanation of both the nature of belief and the apparent failure of substitutivity. However the weakness of both these treatments shows up when we consider Ethel.

⁵ Saul discusses the examples in connection with Richard's version of HIT, which is explicitly committed to the claim that belief reports mention mental representations. Accordingly, she does not discuss the treatment of Jon the behaviorist that I suggest here.

The naïve theorist

Ethel believes that Salmon and Soames' account of the attitude attributions is right. Accordingly, she will count any translation which preserves the Russellian semantic content of her that-clauses as correct, and count any guise of the proposition named by the that-clause as appropriately similar to hers. As a result of Ethel's dispositions her belief ascriptions will not have the purported pragmatic implicatures about how the proposition is believed. In Ethel's mouth (1) will be falsified by believers in the self-identity of Venus. But surely this cannot be right—believing in the naïve theory doesn't do away with the intuitions that the pragmatic account is designed to explain. If it did the task of the naïve theory would be considerably easier.

We do not want to solve this problem by means of the second approach suggested by Jon, as this promises to build up a long list—we now would state the pragmatic implicatures in terms of what speakers think if they were adequately informed, didn't believe in behaviorism, and didn't believe in the naïve theory, and we may well have to add other conditions as other problem cases arise. The account begins to look ad hoc.

Saul discusses and rejects one final approach to the problem of Ethel. We might ask her to specify the 'similar to S' relation in terms of what sentences are misleading, since the naïve theorists account allows that certain belief ascriptions do mislead. Unfortunately, this approach is viciously circular—the pragmatic theory is supposed to explain why the utterances are misleading, and it cannot do so by relying on the dispositions of speakers who are adequately informed, don't believe in behaviorism, and have been asked to respect the intuition that certain strictly true belief ascriptions mislead. Saul notes that in asking Ethel to specify the relation in terms of what would mislead, we are trying to genuinely communicate with her what is needed, but this:

sounds suspiciously like 'terms which could lead her to give answers which accord with our intuitions'. This suspect hand-waving cannot really be avoided: we must keep our statement general enough to accommodate all the various cases which might arise, or risk falling into ad hoc listing as we did above (Saul 1999, 46).

1.1.3 The failure of the naïve view

Actually, the failure of the naïve view to accommodate Lydia should not have been all that surprising. Consider (1) again.

(1) No ancient astronomers believed that Hesperus was Phosphorus.

What could the pragmatic implications of (1) be like on the naïve view? Lydia is using (1) to claim that the ancient astronomers didn't believe something—an type of utterance that the naïve view claims is standardly confused with the claim that the ancient astronomers withheld belief from the proposition under some guise.

(1*) $\exists y \forall x [Ax \rightarrow x \text{ grasps } p \text{ by means of } y \ \& \ \neg BEL(x, p, y)]$

(1**) $\forall x (Ax \rightarrow \exists y x \text{ grasps } p \text{ by means of } y \ \& \ \neg BEL(x, p, y))$

Accordingly, Lydia must be implying either that (1*) is true—that there is some one guise under which all of the ancient astronomers failed to believe the proposition—or that (1**) is true—that for each ancient astronomer there is some guise that they failed to believe the proposition under. In addition in either case her that-clause will imply something about the particular guise(s). What Saul's example shows is that Lydia is not implying (1*)—the guises under which the Babylonians, the linguistically impoverished astronomer, and the seasonal cycle astronomer believe that Hesperus is Phosphorus are all different. However, in order for Lydia to be pragmatically implying (1**) she must somehow be able to communicate what guise she has in mind for each ancient astronomer using just one that-clause—an even more impossible task given her lack of information about those astronomers and the astronomical facts.

1.2 Quasi-singular propositions

On both the neo-Fregean view and Recanati's indexical account the proposition that Lydia claims no ancient astronomer believes will be a quasi-singular one—that is, it will contain two different truth-conditionally irrelevant ways of thinking of Venus.⁶ Thus neither view will have difficulty with the intuition that an ancient astronomers belief in Venus'

⁶ Strictly speaking a quasi-singular proposition is only the object of the belief on the two-component view of *de re* senses, since such propositions include the referent. However, nothing I have to say in this section depends upon the referent appearing in the proposition. Additional approaches available to the two-component view are discussed in the following section.

identity with itself is not a counterexample. Such a belief would be an attitude towards a quasi-singular proposition containing the same mode of presentation twice over. However, the other counterexamples are more problematic. On the neo-Fregean approach the *de re* senses associated with singular terms will differ from individual to individual, and so will the quasi-singular propositions expressed by sentences including them. In extensional contexts this doesn't matter, as the truth conditions are singular. However it does create a problem for ascribing shared beliefs, as is done in (1).

Presumably a claim such as Lydia's must be treated as making a claim about attitudes towards a certain kind of quasi-singular proposition—one with the same singular truth conditions and the same structure. In this case, we might reasonably require, on the basis of Lydia's intentions, that the quasi-singular proposition include two different *de re* senses of Venus. The Babylonian's belief that Hesperus is Phosphorous can, since it would naturally be expressed using their two names for Venus, be treated as a quasi-singular proposition of similar structure to that expressed by our sentence 'Hesperus is Phosphorus'. One might then be tempted to suggest that Lydia's utterance claims that no ancient astronomer endorsed a singular proposition with that structure. However this approach will not accommodate the linguistically impoverished astronomer. This astronomer's belief does not seem to involve a quasi-singular proposition at all, but is instead an attitude towards the proposition expressed by 'the first heavenly body I see in the evening is the same as the last heavenly body I see in the morning'.

One might insist that despite his impoverished language the astronomer in question does have an attitude towards an appropriate quasi-singular proposition. That is, one might maintain that it is a feature of our cognitive structure that we form *de re* modes of presentation of each object of our acquaintance. The approach to *de re* senses that associates them with mental *dossiers* in which we record acquired information about an object would support this position.⁷ While the astronomer's language may prevent him from uttering a sentence with the quasi-singular content in question, the neo-Fregean might maintain that he nonetheless does believe a quasi-singular proposition with appropriate structure.

The seasonal cycle astronomer, who knows the heavenly bodies only by means of the charts others provide her, may seem a less plausible candidate for possessing *de re* senses of Venus, but the dossier metaphor may well seem to allow for it in her case as well. She two

⁷ The dossier idea originates in Evans 1982. The subject of a particular dossier would be determined relationally, perhaps via a causal story, rather than satisfactorially.

may organize the descriptions she associates with each body (e.g. the heavenly body with *this* chart, the one Sarah discovered, etc.) into dossiers of information, and those dossiers may well, as a matter of the cognitive architecture or practices of human beings, operate as *de re* senses. So perhaps she too believes a proposition that is quasi-singular, is true just in case Venus is identical with itself, and contains two different *de re* modes of presentation of Venus.

The problem with this treatment is that it requires that the astronomers in question believe some quasi-singular proposition, and while it is not impossible that the astronomers in question do understand and endorse an appropriate proposition, it seems desperate to insist that they must. If it turns out that the proposition believed by the seasonal cycle astronomer really is that expressed by 'the heavenly body taken to have this cycle (indicating one chart) is the same as the heavenly body taken to have that cycle (indicating a second chart)', and that either she has no *de re* modes of presentation for Venus or that she for some reason fails to believe the appropriate quasi-singular proposition, it seems that Lydia and Martina would *still* count her as a counterexample to Lydia's claim.

1.2.1 The two-component picture

Both Recanati and the neo-Fregean who is willing to treat the *de re* sense as an ordered pair composed of the referent and an ordinary mode of presentation have another option. Instead of treating Lydia's claim as requiring that counterexamples involve individuals who endorse a quasi-singular proposition with an appropriate structure, he can instead approach it by means of the ordinary mode of presentation. Lydia's utterance is falsified by any belief which as its content a proposition with the same truth-conditions as the proposition named by the *that* clause and which is either a quasi-singular proposition involving two different *de re* modes of presentation of Venus or a purely general proposition which includes two different ordinary modes of presentation of Venus. However, not just any ordinary mode of presentations will do. After all, an ancient astronomer who believed that the heavenly body seen this morning by his cousin is the same heavenly body as that seen yesterday morning by his sister has two ways of thinking of Venus—indeed, he may even have two different dossiers, each of which has one of the descriptions above as its sole content. However this ancient astronomer would not count as a counterexample to Lydia's claim.

In order to exploit the two component picture in this way we must put some constraint on the ordinary modes of presentation that can be involved in either a quasi-singular

proposition or a general proposition. How is this constraint specified? The obvious candidates are the intentions of the speaker and the interests of the audience, but as our discussion of the naïve view's problems with the Lydia example showed, this will not solve the problem. The neo-Fregean is in no better position.

1.3 The hidden-indexical view

Since hidden-indexical views rely on speaker intentions and audience interests to specify the missing third part of the content of a belief ascription, it is no surprise that they suffer from the same difficulty in dealing with Lydia's utterance (Saul 1999a: 1999b).⁸ As noted in chapter two, hidden-indexical views differ in part in virtue of what they take the third part to be—for Crimmins belief ascriptions generally specify a particular mental representation, whereas in Richard's account they instead place constraints on the kind of mental representation that can be involved in the belief. Since Crimmins' account treats generalized belief ascriptions like that involved in (1) in terms of constraints on notions rather than in terms of the specification of notions, and so is importantly similar to Richard's in as far as (1) is concerned, I shall give the details of the problem in terms of Crimmins' view alone. The general difficulty applies equally to Richard's account, though the details differ. Forbes' neo-Fregean version of HIT, with its dependence on a contextually specified linguistic counterpart relation, will have similar difficulties if it depends on speakers intentions and (or) audience interests to determine the relation. If it does not, then Forbes owes us an explanation of what contextual features it does depend on (Saul 1999a, 30f6).

1.3.1 Crimmins' account⁹

Crimmins treats a typical belief ascription as specifying both the propositional content of the belief and the mental state which realizes the belief. The *that*-clause names the content, while the mental state is the unarticulated constituent which is contextually supplied. The mental state, like the proposition which is its object, possesses structure—where the proposition contains individuals the mental state contains *notions*, and where the proposition contains properties the mental state contains *ideas*. Notions (which will be my focus in what

⁸ Richard's version of HIT is discussed in Saul 1999a, Crimmins' in Saul 1999b.

⁹ See Crimmins 1992; Crimmins and Perry 1989.

follows) can be specified in two ways—they may be provided as a constituent of the proposition expressed by the belief report, or the proposition expressed may be an existential claim that there is some notion meeting certain conditions that is involved in the belief. This latter phenomenon is of course what is operative in generalized belief reports such as that made by Lydia.

Regardless of whether the notions are provided or merely constrained by the belief ascription, the mechanism by which they are introduced involves *providing conditions* (Crimmins 1992, 182; 190). These conditions either determine which notions are provided or, where the notions are merely constrained, appear as part of the propositional content of the belief report. The providing conditions are descriptions of notions, where either the notion satisfying that description or the description itself forms part of proposition expressed by the report.¹⁰

Providing conditions arise out of the context of the belief report. Normally this will not require much work on the part of speakers or audience, as Crimmins proposes that there are a number of standard providing conditions used in belief reporting. These include *being a normal notion*, *being a de dicto notion*, *being a notion linked to a particular perception or action*, and *being a self-notion* (Crimmins 1992, 158-168). A self-notion is simply that special notion which each of us has of ourselves. A *de dicto* notion is one associated by the believer with a particular word or expression. A notion may be linked to a particular perception or action in cases where that action or perception is object-directed. For example, when we see someone toss a rock up and down, we may reasonably conclude that they have some perceptual notion of the rock that is involved in her action. In contrast, when we see someone absent-mindedly kick a rock as they walk past it is very unlikely that they had any perceptual notion of the rock—they probably had no idea it was there when they moved their leg.

Normal notions are more difficult to pick out, but also more important, in that being a normal notion of something is the default providing condition for a belief report. Crimmins writes that:

What counts as normal depends at least on the intents and purposes of the discourse, and the community among which the agent is being considered by the participants in

¹⁰ To be more precise, the providing conditions are clusters of descriptions, not all of which necessarily need to be met by a given notion in order for it to be the notion provided in a given belief report (Crimmins 1992, 168-169). However it will not matter for our purposes if we speak as if there were just one providing condition.

the dialogue. It is a vague condition, but usually the presupposition that the an agent has a normal representation of a certain relation or individual is unproblematically obvious (Crimmins 1992, 158).

Part of what characterizes a notion as normal relative to a given community is to have normal beliefs associated with that notion and normal abilities to recognize the person it is the notion of (Crimmins 1992, 92-98). For example, Crimmins suggests that almost every U.S. citizen will have a normal notion of Ronald Reagan that "is associated with the properties *being tall*, *being an actor*, *being a Republican*, *being called 'Reagan'*, and so on" (97). Other notions may be normal relative to much smaller communities—e.g. the normal notion of W. V. O. Quine possessed by analytic philosophers, the normal notion of Jenny Shipley possessed by New Zealanders, or the normal notion of Alex Wynne possessed by members of the University of Canterbury Department of Philosophy.

1.3.2 Lydia and Crimmins' providing conditions

Normal notions will simply not do for Lydia's utterance of (1).

(1) No ancient astronomers believed that Hesperus is Phosphorus.

Normal notions of Hesperus, what ever they are in the linguistic community in question, are also normal notions of Phosphorus.¹¹ However, The most natural intention to ascribe to Lydia, given her belief that the ancient astronomers used the words 'Hesperus' and 'Phosphorus' is that of invoking a *de dicto* notion. However, this will not do, given that she would count the Babylonians, with their Akkadian names, as a counterexample. A natural modification would be to allow her to intend to invoke the providing condition that the notion be a *de dicto* one involving either the words 'Hesperus' and 'Phosphorus' or any translation of them into

¹¹ Crimmins explicitly acknowledges that we rely on the fact that it is highly unlikely that an individual can have two notions of an individual that are both normal (Crimmins 1992, 97). However, even if we generally had two normal notions of Venus then Lydia will have to intend more than just that the notion of Venus in each spot in the mental representation be a normal one if she is to make an utterance that is not falsified by beliefs in the self-identity of Venus. Nor is it sufficient for her to intend merely that there be two notions involved, as we saw in the neo-Fregean case.

appropriate languages. On this account however, the linguistically impoverished astronomer would not count as a counterexample (Saul 1999b, 365).

We could accommodate the linguistically impoverished example in one of two ways. We could, as Saul suggests, construe Lydia as giving a providing condition that calls for a notion associated with either the appropriate translation for 'Hesperus' or appearing in the evening and then a providing condition associated with either the appropriate translation for 'Phosphorus' or appearing in the morning (Saul 1999b, 366). Alternatively, we could modify Crimmins' account slightly and interpret her as giving the providing condition that the notion be the notion normally associated with the word 'Hesperus', as the notion normally associated with 'Hesperus' in the community of philosophers of language could reasonably be construed as involving evening appearances, and similarly for 'Phosphorus' and morning appearances. The idea here is that just as there are notions that are normal notions of an individual there are notions which are the normal *de dicto* notions for a given name. However, both of these approaches come at a price. In the first instance we must allow that Lydia can intend and communicate to Martina providing conditions that she knows nothing about. In the second we must say that she can refer to a notion that is normal in certain respects even when neither she nor her audience has a normal notion.

This second choice is perhaps less implausible. However, neither of these approaches will accommodate the seasonal cycle astronomer. I suspect that very many philosophers of language do not know that the morning and evening appearances of Venus occur on different days, never mind in different seasons.¹² So we must resort to a complicated providing

¹² One might object that the community of philosophers of language is simply the wrong community. Instead, Lydia might defer to historians of astronomy, counting as her providing condition whatever providing condition they took to be relevant. There are two problems with this. First of all, while historians of astronomy might seem to be the appropriate experts here, there are cases in which there seem to be no experts. Saul discusses the case of the Portland Bistro and the FBI, based on the case of Alice Metzinger, a Portland bistro chef, who some years ago revealed that she was in fact the bank robber Katherine Ann Power, then a noted member of the FBI's most wanted list (Saul 1999b, 361-364). Saul asks us to imagine that Alice Metzinger's employees are devotees of the most wanted list, and that some time before the revelations they have a light-hearted conversation in which one of them makes the following claims about his colleague, Ray.

(a) Ray believes that Alice Metzinger is wanted by the FBI.

(b) Ray believes that Katherine Ann Power is wanted by the FBI.

These attributions cannot be invoking normal notions, for reasons parallel to the Lydia case. However, reflection on the truth-conditions shows that they the speaker is not attributing *de dicto* notions. Suppose that Ray was just hired by the senior waiter and does not know Alice's name, but has seen incriminating evidence sticking out of

condition that involves constraints Lydia doesn't know about. Just as in the case of the naïve view and the neo-Fregean view, we can only accommodate our intuitions about the counterexamples at the price of attributing intentions to Lydia that it seems she just cannot have.

2. *Dressing like Superman*

The case of Lydia and the astronomers, perplexing as it is, is of a familiar kind. Problems with attitude reports have a history going back to the medievals. It is generally thought that the treatment of proper names and other singular terms in sentences that do not contain any attitude verbs is without difficulty. Recently Saul and Anne Bezuidenhout have introduced a number of apparently simple sentences that are associated with the same anti-substitution intuitions that have been so difficult to account for in the case of the propositional attitudes. I begin with some puzzling sentences due to Saul (1997). In each case there seem to be circumstances where the first sentence seems true but its companion false (here and throughout the Superman fiction should be treated as fact).

(5) Clark Kent went into the phone booth, and Superman came out.

(5*) Clark Kent went into the phone booth, and Clark Kent came out.

(6) Clark Kent always arrived on the scene just after one of Superman's daring rescues.

(6*) Superman always arrived on the scene just after one of Superman's daring rescues.

(7) Dan dresses like Clark Kent.

(7*) Dan dresses like Superman.

(8) She made a date with Superman, but found herself having dinner with Clark Kent.

(8*) She made a date with Superman, but found herself having dinner with Superman.

her bag and formed the belief that she is wanted by the FBI. We would intuitively count that as, to the ascriber's surprise, verifying (a). However, it is implausible to think that there are any relevant experts in this case.

(9) Clark was in despair because Lois had fallen for Superman.

(9*) Superman was in despair because Lois had fallen for Superman.

Suppose that (5) is a true description of the events outside the Metropolis office of the Daily Planet. Substitution produces (5*), which seems false. Similar intuitions arise for (6)-(9), but in none of these cases can this be explained by the presence of a propositional attitude verb. There are no attitude verbs in (5)-(8), and the problematic substitution in (9) is in the subject position and thus not within the scope of the attitude verb.¹³

Saul's second group of sentences are even more pernicious—in each case the second sentence seems not just false but necessarily so.

(10) Superman is more successful with women than Clark Kent.

(10*) Superman is more successful with women than Superman.

(11) Batman is more resistant to bullets than Bruce Wayne.

(11*) Batman is more resistant to bullets than Batman.

(12) Lois kissed Superman before she kissed Clark Kent.

(12*) Lois kissed Superman before she kissed Superman.

(13) I never made it to Leningrad, but I visited St. Petersburg last week.

(13*) I never made it to Leningrad, but I visited Leningrad last week.

(14) He hit Clark Kent once, but he never hit Superman.

(14*) He hit Clark Kent once, but he never hit Clark Kent.

Furthermore, whatever is going on in these cases doesn't depend on either the speaker or the audience being unaware of the relevant identities. *Prima facie* it seems that the names in these

¹³ Crimmins claims that treating the subject terms of the belief attribution in (c) as opaque is the right treatment of Richard's steamroller argument (Crimmins 1992, 32).

(c) The man watching you believes you are in danger.

On his view the subject term can sometimes play a role in pragmatically determining the unarticulated constituent of propositional attitude reports. Given the plausibility of this approach on his and similar accounts it is fair to say that (9) and (9*) are not problems for HIT.

sentences are making importantly different contributions to the truth conditions of these sentences.

What should we say about these sentences? Defenders of the naïve view are perhaps in the best position in this respect, as they can consistently claim that the anti-substitution intuitions involved are in fact mistaken. In fact, the existence of such intuitions in what might seem to be extensional contexts might well be seen to support the view that such intuitions are based on confusion and best accounted for in terms of pragmatics, notions of assertability, and conversational implicature.

Advocates of the hidden-indexical account, neo-Fregean views, or the indexical theory of names are in a more difficult position. Of course it is open to them to simply deny that the intuitions in question are correct, and to maintain that they should be given a pragmatic explanation. But we are then entitled to ask why the intuition that these pairs of sentences differ in truth value is to be taken less seriously than the intuition that attitude ascriptions like (15) and (15*) differ in truth value.

(15) Lois believes that Superman can fly.

(15*) Lois believes that Clark Kent can fly.

For the moment let us assume that the substitution failure (SF) in (5)-(14) should be accommodated in the semantics by any account that attempts to accommodate the SF in (15). (I will return to this issue in section 4 of this chapter.) Can any of the accounts we have discussed be extended? Graeme Forbes has attempted to extend his version of HIT to Saul's examples, and Joseph Moore has defended a contextualist account of these sentences that could be accommodated by the indexical account of names.

2.1 Forbes and ways of dressing

On Forbes' version of the hidden-indexical account belief ascriptions contain an implicit logophor. Accordingly, (15) is correctly interpreted by (15F).

(15F) The abstract situation of Superman's being able to fly is such that Lois believes her *so-labeled way of thinking of it*.¹⁴

Thus the words in the that-clause refer to the abstract situation—for the neo-Russellian, the singular proposition—but SF occurs because the logophor 'so-labeled' in turn refers to them. Substitution of co-referential terms doesn't change the reference of the term, but it does change the reference of 'so-labeled'. The labeling relation between that-clauses and ways of thinking is context sensitive. Forbes exploits the fact that just as the relationship between abstract situations (or singular propositions) and ways of thinking of them is one-to-many, so is the relationship between individuals and ways of presenting themselves in order to explain (5), which on his view is correctly expanded as (5F) (Forbes 1997).

(5) Clark Kent went into the phone booth, and Superman came out.

(5F) Clark Kent, so-attired, went into the phone booth, and Superman, so-attired, came out.¹⁵

In (5F) the first 'so-attired' has the same referent as 'attired in the "Clark Kent" manner', and SF occurs because substitution of 'Superman' would change its referent to 'attired in the "Superman" manner' (*ceteris paribus* for the second 'so-attired'). Saul was quick to point out that this treatment in terms of ways of dressing can not be expanded to cases like (16) (Saul 1997b).

(16) Clark went to the fancy-dress party as Superman.

¹⁴ Abstract situations are Forbes' analogue of singular propositions—in particular they are the bearers of modal properties (Forbes 1989).

¹⁵ The logical form of (5F) will be that of (d). Forbes treats 'so-attired' as elliptical for 'attired in the so-labeled way'. Labeling is a contextually determined relation between names and ways of dressing. Some irrelevant details have been abstracted away from.

(d) Clark went into p & (the α : α is labeled so)[he_{Clark} was attired in α] & then (Superman came out of p & (the α : α is labeled so)[he_{Superman} was attired in α])

On this account the reference of 'so' is fixed by the context—in particular by the intentions of the speaker. Thus (d) represents the linguistic meaning of (5F), but it does not express a complete proposition until the context is fixed.

In order to accommodate a case like (16) Forbes must generalize from ways of dressing to something like *ways of presenting oneself*—in the case of (16) Clark presents himself as Clark, despite the fact that he is wearing the attire usually associated with presenting himself as Superman.

2.1.1 Modes of self-presentation

One problem with this is that it is hard to understand what ways of presenting oneself might amount to. Saul makes this point in her reply to Forbes, in which she observes that the obvious candidates for explaining modes of self-presentation all fall down in some way (Saul 1997b, 115-117). It is not a matter of how others think of you, as Clark can present himself as Clark even when no one else is around. Nor can it be a matter of how you think of yourself, as it seems that Clark can attempt to present himself as Clark and fail—perhaps because he has forgotten to remove the cape and tights, or perhaps because he is caught melting a lock with his x-ray vision. Dispositions to behave in particular ways might seem a good candidate, but this won't in general do either. As Saul says, "sometimes Superman doesn't behave like Superman" (1997b, 117). When, as frequently happens to superheroes, the villain uses a device to cause Superman to destroy the city instead of save it, we still want to say that it is a Superman mode of self-presentation.

Forbes acknowledges this difficulty but writes:

I do not think that this exhausts the field. A certain extraterrestrial leads a double life. In one life, he must conceal the fact that he comes from another planet, that he has extraordinary powers, and so on. In the other life, he must at least conceal the existence of his first life. And at the *changeover* points, he must be careful not to be observed. This much is obvious, and shows we have the conception of a single individual who puts on one performance for some stretches of his life and a different performance for others. In our example, these stretches are bounded by changeover points which are typically, but not necessarily and not merely, marked by a change in costume. However, either performance can itself embed an imitation of someone 'else', and this 'other' person can even be the other 'self'. ... It is important [to the fancy-dress party case] that donning the Superman costume does not occur at a changeover point, but is an integral part of a stretch of the 'Clark' performance (Forbes 1999, 89).

This passage is certainly an accurate description of our understanding of the situation, but it doesn't answer Saul's question. It amounts to admitting that we can't say what modes of self-presentation—or *persona*, as Forbes dubs them—are, but insisting nonetheless that our grasp of the situation amounts to a grasp of the idea of a persona. The danger is that without some more specific account of what a persona amounts to we have no idea what the identity or existence conditions for persona are. As a consequence, we are in danger of interpreting tacit reference to personas in whatever way will save our intuitions.¹⁶

2.2 Moore's reference-shifting account

One approach to these sentences that Saul considers briefly and then rejects is to treat 'Clark Kent' and 'Superman' as referring to temporal stages of Clark in (5) but to the individual in (17) and (18) (Saul 1997a, 104-105).

(5) Clark Kent went into the phone booth, and Superman came out.

(17) Clark Kent is Superman.

(18) Clark Kent can fly, although he conceals this fact.

Saul rejects this account on the grounds that the reference-shifting claims needed to support it are simply too extreme to accept. However, a version of this sort of view has subsequently been defended by Moore (1999).

¹⁶ The use of the more general notion of a persona to treat examples like (16) also raises some technical difficulties for Forbes' account.

(16) Clark went to the fancy-dress party as Superman.

Forbes renders (16) as (16F).

(16F) Clark, so personified, went to the fancy-dress party attired in the way labeled 'Superman'.

However, the logical form of (16F) and relatives such as (e) (see note 17) cannot be captured by a temporally ordered conjunction, as was done for (5F) (see note 15).

(e) While talking on the phone to Superman, Lois looked through the window at Clark Kent.

As a result, Forbes resorts to an adverbial account including quantifying over events (1999, 90). Thus the logical form of (16F) is rendered as (f) (where e is a variable ranging over events, the labeling relation is contextually determined, and some details are abstracted away from):

(f) (some e : e is an attending)[Clark is the agent of e & p is the goal of e & (the α : α is labeled so)[he_{Clark} is personified as α in e] & (the β : β is labeled 'Superman')[he_{Clark} is attired in β in e]].

In short, Forbes proposal has become very complicated very quickly.

On Moore's account the proper names in opaque readings of (5) do not pick out the individual Clark but distinct *aspects* of him. Aspects are not modes of presentation (self or otherwise)—indeed, they are not psychological or representational entities at all. Instead, aspects are parts of the world that have much the same properties as individuals do. They walk around, are successful with women, are kissed and resist bullets poorly, and so on. For the moment let us accept the existence of aspects in order to explain Moore's account. His reading of (5) is (5M).

(5M) Clark/Superman's Clark-aspect walked into the phone booth and his Superman-aspect walked out.

Now the relationship between aspects of individuals and the individuals is a complicated one. Some properties of aspects are *ipso facto* properties of individuals. Walking is one of these, so (5M) entails (but does not assert) (19).

(19) The individual Clark/Superman walked into the phone booth and the individual Clark/Superman walked out.

The idea that an aspect cannot walk without the individual of whom it is an aspect walking arises, claims Moore, from the nature of walking (Moore 1999, 95). In contrast, (10), read as (10M), does not entail the necessarily false (20).

(10) Superman is more successful with women than Clark Kent.

(10M) Clark/Superman's Superman-aspect is more successful with women than Clark/Superman's Clark-aspect.

(20) The individual Clark/Superman is more successful with women than the individual Clark/Superman.

On Moore's view this disparity arises because the relative romantic success of an individual's aspects is analogous to the lengths of her limbs. It is not mysterious, he writes, to allow "that Lois's left leg is longer than her left arm, although Lois is not, of course, longer than herself" (Moore 1999, 95). In this Moore seems right—aspects, if they are to be allowed at all, are

something like parts of an individual (though not temporal or physical parts), and it is no news at all that not all the properties of a part are properties of the whole.¹⁷

One final thing to note about Moore's proposal is that it preserves a kind of secondary reference to the individual who is the usual referent of the name. This is important because it allows for a smooth treatment of anaphoric reference. On Moore's account the pronoun 'he' picks up on the secondary reference of 'Superman' in (21), just as 'she' picks up on the secondary reference of 'Lois's left arm' in (22) and 'it' picks up on the secondary reference of 'the engine's carburetor' in (23) (Moore 1999, 98-99).

(21) Clark Kent went into the phone booth, and Superman came out, but he didn't look happy .

(22) Lois's left arm was sore, so she went to the doctor.

(23) The engine's carburetor was missing, so it didn't run very well.¹⁸

2.2.2 The metaphysics of aspects

So, what are aspects? In Moore's view aspects are "primitive, irreducible, and ... somewhat indeterminate entities" that are demanded by our pre-reflective conceptual scheme (Moore 1999, 103). It is tempting to explain them in terms of collections of properties, but at best these collections can serve to model the aspects, as aspects, but not collections of properties, can walk around, write for the newspaper, and have varying degrees of romantic success. Importantly, aspects cannot be anything like Forbes' persona if these require any sort of mental life or ability to present, as this cannot accommodate sentences like (13).

(13) I never made it to Leningrad, but I visited St. Petersburg last week.

¹⁷ Aspects are not temporal parts or collections of them because temporal parts simply won't do the job. Imagine, for example, that Clark talks to Lois on the phone in his Superman aspect while sitting at his desk in the Daily Planet. If Lois raises the blinds on her office we might truthfully utter (e).

(e) While talking on the phone to Superman, Lois looked through the window at Clark Kent.

¹⁸ Sometimes the anaphoric reference is to the primary referent, as in (g) and (h):

(g) Superman is more successful with women than Clark Kent, but they are both unsuccessful with men.

(h) The engine's carburetor was missing. It had been stolen.

Indeed, to accommodate (13) and sentences like it Forbes adopts Moore's aspects in place of his persona (Forbes 1999).

Moore apparently sees aspects as something which are inherently tied up with the semantics of our language. While he maintains they exist independently of us, he also suggests that due to their role in conversation they can be of varying degrees of completeness and are often vague and underspecified. As a result, there may be no answer to Saul's question about whether a showering Clark/Superman is a showering Clark-aspect or not (Saul 1997a, 104), and (5) might have an indeterminate truth value if Clark/Superman enters a beach-side phone booth and emerges clad only in purple swim trunks (Moore 1999, 104). That is, there may be no answer to the question 'which aspect do purple trunks go with?'.

All of this may seem to leave us without much of an account of aspects and some worrying metaphysical commitments. Moore defends his reliance on them by making three points (Moore 1999, 104-105). First, he maintains that similar entities will be required by any account that attempts to accommodate an assertive difference between the paired sentences above, *even* if that account locates the difference in pragmatic features of the assertion. Second, it seems that aspects, or something like them, may be required by other parts of the semantics of natural language—in particular to make sense of our talk of appearances, guises, voices, moods, etc. Finally, he thinks that we talk about aspects in flexible and variable ways, and that this flexibility *ipso facto* means that very little can be said about aspects in general, though we may well be able to talk about particular aspects in great detail.

2.2.3 Aspects and the indexical view of names

One interesting feature of Moore's account is that it can be smoothly incorporated within the indexical view of names advocated by Recanati. Recall that on Recanati's account the linguistic meaning of a proper name is such that:

a proper name NN occurring in an utterance 'NN is *G*' indicates that there is an entity *x*, called NN (linguistic mode of presentation), such that the utterance is true iff *x* is *G* (Recanati 1993, 140).

Since Moore's view is that among the entities called Clark there are both the individual Clark/Superman and the Clark-aspect of that individual, and since that aspect is a bit of the world to which we can directly refer, it seems open to the defender of Recanati's view to

accommodate the simple sentences by means of the reference-shifting account. Sentences containing singular terms would still express singular propositions, but instead of these containing individuals, they would contain aspects.¹⁹

2.3 Speaking to the unenlightened

One problematic feature of both accounts which attempt to accommodate SF in simple sentences semantically is they distinguish between *enlightened* and *unenlightened* contexts of utterance for (5) and (5*). In enlightened contexts, the speaker (and perhaps the audience) knows about the identity in question and is able to form intentions to refer to persona or aspects of individuals and thus use (5) to talk about Clark/Superman's different identities. In contrast in unenlightened contexts, the speaker is ignorant of some crucial identity and will intend to refer to individuals with their use of the names, and thus when they utter (5) it does not differ in truth conditions from (5*).

Forbes supports this gulf between the unenlightened and the enlightened by considering an utterance of (24) (Forbes 1999, 88).

(24) Clark Kent went into the phone booth, but Superman, not Clark, came out.

He maintains that if an unenlightened speaker—say Lois—utters (24), she will, upon learning about the relevant identity, withdraw the statement, having seen the contradiction. In contrast, the enlightened speaker's utterance of (24) will have similar content to their utterance of (5), and since by hypothesis they already know about the relevant identity, they will not withdraw the statement upon being reminded of it. Moore, with whom the distinction originates, says further that on his view an utterance of (5) by the unenlightened Lois will be true, but have the same truth conditions as (5*), while her utterance of (10) will, like (10*), be false (Forbes 1999, 93-94).

(5) Clark Kent went into the phone booth, and Superman came out.

(5*) Clark Kent went into the phone booth, and Clark Kent came out.

¹⁹ What is essential to singular propositions is that they contain something other than ways of thinking about things.

(10) Superman is more successful with women than Clark Kent.

(10*) Superman is more successful with women than Superman.

Forbes, and Moore appear to accept without question that we can unproblematically treat (5) as semantically identical to (5*) in unenlightened contexts, and that an utterance of (24) by an unenlightened speaker would be withdrawn when she became enlightened.

This just seems to be mistaken. Lois communicates something different with an utterance of (5) than she does with (5*), even if both she and her audience are ignorant of the relevant identity. Imagine that Lois is being interviewed by a detective after an explosion and a rescue by Clark/Superman. He asks Lois to say what happened just before the daring rescue, and she replies she glanced over her shoulder and saw Clark enter a phone booth. Our detective asks what occurred next, and Lois explains that there was an explosion, she rushed across the street to help, and a few minutes later when someone called out "There's Superman", she looked back and saw Superman emerge. Seeking clarification, the detective says, "So who entered the phone booth and who came out?" and Lois replies with an utterance of (5).

Admittedly (5) itself is a little awkward, but we can easily imagine Lois uttering simple sentences that contain something like it as a part, like (25).

(25) Clark entered the phone booth, and then the building exploded, and then later Superman came out of the phone booth.

Now a suitably enlightened Lois will not need to withdraw (25) due to the middle clause, and we have no reason to judge that clause false. So for our purposes (25) is not importantly different from (5). However, Lois's utterance communicates something to the hearer that an utterance of (25*) would not.

(25*) Clark entered the phone booth, and then the building exploded, and then later Clark came out of the phone booth.

The detective who heard (25*) could reasonably ask "so when did Superman arrive?", but this would be an odd question if Lois had just uttered (25). Nor does it seem that an enlightened Lois would withdraw either (5) or (25)—indeed, she might well endorse them again, saying "so that explains why so little time passed between Clark going into the phone booth and

Superman coming out". So we have to account for this in some way. Since Forbes and Moore are committed to saying the difference is not a difference in semantic content, they must explain it by means of some other aspect of what is communicated—that is, by means of pragmatics.²⁰

I think this much is uncontroversial. The question is, if (5) and (5*) communicate something different regardless of whether the context of utterance is enlightened or unenlightened, why should the explanation of the difference in enlightened contexts posit a difference in semantic content, while the explanation in unenlightened contexts posits only a difference in pragmatic implications?²¹

2.4 The enlightened speaker and the sex-scandal

In her (1999c) Saul offers an extended criticism of aspect/persona based accounts. Her worry is that due to the distinction between the enlightened and the unenlightened speaker and the emphasis on speaker intentions, Moore and Forbes will be forced to accept some rather unpleasant consequences. Consider the following situation:

A certain White House intern leads a double life. In one life, she must conceal the fact that she visits the President in his private office at night, that she has 'improper' relations with him, and so on. In the other, she must at least conceal the existence of

²⁰ Moore perhaps misses this because there are not many contexts in which we can imagine uttering (5*)—he notes that it and (10*) are "odd sentences to utter in any context. Their utterance, ... , might well change the semantic presuppositions of the context, or (depending on how we individuate contexts) bring about a new context" (Moore 1999, 94f6). However I think (5*), though not of course the inconsistent (10*), loses a great deal of its strangeness in the context of a police interview in which a higher degree of precision is expected. Part of the remaining strangeness of (5*) arises because we would normally replace the second occurrence of the name with a pronoun. The reason (25*) sounds more natural because the intervening clause, combined with the demand that people in police interviews avoid any possible ambiguity, makes the reuse of the name less jarring.

²¹ Moore suggests that some of our intuitions are to be explained by the difficulty of imagining a single context in which one could utter either (5) or (5*)—a task which is even more difficult for (10*). As a result we shift contexts without intending to, or imagine what he calls a mixed context—one in which the enlightened speak to the unenlightened, or vice versa. Moore says that in mixed contexts an utterance of (5) would really express two propositions—one a claim about Clark/Superman, and one a claim about his aspects (Moore 1999, 96). I think the police interview context is sufficiently well-developed to rule out either shifting contexts or mixed contexts—the police detective is as much in the dark as Lois.

her first life. And at the *changeover* points (say, entering the Oval Office on the weekend) she must be careful not to be observed (Saul 1999c, 108).²²

This description, invoking as it does Forbes' description of the Superman story, seems to allow us to make sense of two aspects of Monica Lewinsky. The first, which Clinton no doubt referred to as 'Miss Lewinsky', engages in the standard tasks of an intern and is merely casually acquainted with the President. The second, 'Monica', has a much more intimate relationship with Clinton. Saul's worry is that on Forbes' or Moore's account Clinton could exploit this fact to ensure that his utterance of (26) was not a lie.

(26) I did not have sexual relations with that woman, Miss Lewinsky.²³

As long as Clinton intends to refer to the 'Miss Lewinsky'-aspect or persona it seems that he can avoid the charge that he lied. It is after all true that he never had sexual relations (by anyone's definition) with Monica Lewinsky in her 'Miss Lewinsky'-aspect. But this just seems wrong. Clinton could not evade the charge of lying in this way.

Saul considers various approaches, including putting constraints on speaker's intentions, making the context dependent on the audience's enlightenment rather than the speaker's, and ruling that the utterance does not express anything truth-evaluable in a context in which there are both unenlightened and enlightened participants (Saul 1999c, 109-111). Her criticisms of all these approaches are well taken. However she does not consider the one option which Moore actually proposes for mixed contexts: "a sentence uttered in this mixed context might assert two different propositions, for the context is really, as it were, a combination of the two" (Saul 1999, 96). On this interpretation Clinton lied because the context was one in which his utterance of (26) expressed two propositions—that he did not have sexual relations with Monica Lewinsky in her 'Miss Lewinsky'-aspect, and that he did not have sexual relations with the individual Monica Lewinsky. It's not clear that there is any

²² The facts: President Clinton was accused of having an affair with Monica Lewinsky, a White House intern, in January of 1998. He did not admit to the affair until August of that year. The question of whether Clinton had actually lied about the affair was the focus of much of the public attention.

²³ The sentence, from Clinton's January 1998 press conference, is as Saul notes a little odd (1999, 109f5). One natural reading has 'Miss Lewinsky' referring to the addressee while 'that woman' refers to some other person. Like Saul, I will assume that this reading has been somehow ruled out.

way for Forbes to adapt this proposal to fit with his semantic account, but Moore does seem to be able to evade Saul's critique.

2.5 Simple sentences and demonstratives

Another group of problem cases has been offered by Anne Bezuidenhout (1996). Her cases do not concern names, but those supposedly paradigmatic examples of directly referential terms, demonstratives. Bezuidenhout advocates a neo-Fregean view on which the propositions expressed by utterances using singular terms will involve *de re* modes of presentation of the referents of those terms. However, unlike Evans, McDowell, Peacocke and Forbes, Bezuidenhout argues that *de re* modes of presentation must be truth-conditionally relevant—that is, that propositions differing only in that they contain distinct but co-referential *de re* modes of presentation can differ in truth value. Key to her case are a number of conditionals.

Suppose that in (27) and (27*) the demonstratives all refer to the same boy, but that while all occurrences of 'this boy' are associated with the boy visually presented to the participants in the conversation, the occurrence of 'that boy' is associated with a boy (met yesterday) who the participants have been discussing.

(27) This boy is this boy.

(27*) This boy is that boy.

On both the neo-Fregean and the neo-Russellian accounts of demonstratives (27) and (27*) will have the same truth-conditions. On the neo-Russellian view they will both express the same singular proposition, while on the neo-Fregean view they will express different quasi-singular propositions with the same truth-conditional content. Now consider the same situation, but suppose that one of the participants in the above conversation—John—does not yet know that the visually presented boy and the boy under discussion are one and the same. In this context it seems that (28) is false and (28*) true.

(28) If this boy is this boy, John will be surprised.

(28*) If this boy is that boy, John will be surprised.

If (27) and (27*) have the same truth-conditional content, how is it that (28) and (28*) have different truth-values, since they differ only in the substitution of (27*) for (27).

One possible approach to (28) and (28*) is to claim that the clauses containing the demonstratives are in fact, appearances notwithstanding, inside the scope of the attitude verb. That is you might treat the form of (28) and (28*) as being 'If ..., then John will be surprised *at that*' (Bezuidenhout 1996, 152). However, this fix will not work for all her examples. Consider (29) and (29*).

(29) If the boy lifts this, John will think the boy is strong.

(29*) If the boy lifts that, John will think the boy is strong.²⁴

Imagine that you are standing with John viewing a room in which there are apparently two dumbbells, one real and one Styrofoam, and a young boy. You and John reasonably judge that (29) and (29*) are true and false respectively. However, unbeknownst to both you and John there is just one dumbbell which, due to some careful effects, you are perceiving from two angles—one of which reveals that it is a fake. Despite the fact that there is just one dumbbell, it still seems that (29) is true and (29*) false. If they differ in truth value, however, it can only be because 'this' and 'that' are making different contributions to the information content of the sentences—and since their referent is the same this must be conceptual content.

Perhaps the antecedent of (29) and (29*) is also somehow within the scope of the attitude verb. Since the object of John's attitude is specified, it cannot be a simple implicit reference demanded by the form of attitude ascriptions, as was proposed for (28) and (28*). Instead, it must be something more complicated. Bezuidenhout suggests that the most plausible account is to claim that (29) and (29*) have the form 'If ..., *and John is aware of that*, then John will think the boy is strong' (Bezuidenhout 1996, 153).

The plausibility of this account of the form of (29) and (29*) rests on the idea that if we are to understand there to be a causal relation between the event of the antecedent and the event of the consequent we must take John to be aware of the antecedent in some way (Bezuidenhout 1996, 153). Bezuidenhout argues, however, that (29) and (29*) come apart in truth value even if we understand them to be simple material conditionals. To dramatize the point, she asks us to imagine that there is a machine in the room which detects the

²⁴ Bezuidenhout's original examples used 'If the boy can lift ...', but this formulation seems to weaken rather than strengthen her subsequent treatment of them as material conditionals.

physiological changes which occur in John's body when he is surprised.²⁵ Whenever the changes occur a light on the machine flashes. After the boy apparently lifts a real dumbbell the light flashes, but when he apparently lifts a fake one the light stays dark. You and John reasonably judge that the material conditionals (30) and (30*) are true and false respectively:

(30) If the boy lifts this, the light will go on.

(30*) If the boy lifts that, the light will go on.

Bezuidenhout's claim is that since we understand (30) and (30*) without understanding the causal connection between the boy's actions and the behaviour of the machine, we must be able to understand (29) and (29*) without understanding the causal connection between the boy's actions and John's behaviour. Therefore, she concludes, we can understand (29) and (29*) as without reading into them the clause 'and John is aware of that' (Bezuidenhout 1996, 153). One difficulty with this is that while it does seem that (30) and (30*) can be read as simple material conditionals, we are much less inclined to count them as actually differing as truth value. If we read (29) and (29*) in this way then it seems reasonable to think that they have the same truth value in every case. In the case where boy does appear to lift a real dumbbell both (29) and (29*) are true, as it is true that John thinks the boy is strong. If the boy doesn't appear to lift either a real or a fake dumbbell then they are again both true, since the antecedent is false. Finally, if the boy appears to lift a fake dumbbell but not the real one, then they are both false, since the consequent will be false. It is only on the causal interpretation of the conditional that we have the intuition that (29) and (29*) come apart in truth value.

Despite this problem the case of the surprise detecting machine might allow us to construct a version of Bezuidenhout's example that does not suffer from this problem. Suppose that on the basis of watching the behaviour of the boy and the flashing light I utter (31).

(31) When the boy lifts this the light flashes.

We would intuitively count this as true, and its counterpart (31*) as false.

²⁵ Bezuidenhout specifies that the machine is hooked up to John, but since this might reinstate the causal connection it seems better to view the machine as scanning John without the audience being aware of it.

(31*) When the boy lifts that the light flashes.

Furthermore, it seems that we could use (31) to say something true even if everyone other than John were enlightened—if, for example, we were observing John through a one-way mirror as part of an experiment. It does not seem reasonable to insist that (31) and (31*) implicitly place the demonstrative within the scope of an attitude verb, especially since they report simultaneity rather than causation. It seems therefore that names aren't the only singular terms for which there is apparent SF in simple sentences.

3. *Defending the simple sentence counterexamples*

One common response to the Saul style examples is to claim that they can all be adequately explained. For example, it has been put to me by various philosophers in conversation that the right thing to say about:

(13) I've never been to Leningrad but I visited St. Petersburg last week.

is that it is just a witty way of saying (on one reading):

(32) I never visited St. Petersburg while it was called Leningrad, but I did visit it last week.

The difference between the propositional attitude cases and the simple sentences is, it has been suggested, that people get worked up when you claim, for standard example, that they believe that Hesperus is Phosphorus in virtue of believing that Hesperus is Hesperus. Nobody, they claim, gets worked up about the former case.

The problem here of course is that the two cases are not, as put, equivalent. The case of (32) is a case where the identity in question can be known to both speaker and hearer. And of course it is true that in such a circumstances, the hearer who said "you mean you never visited St. Petersburg while it was called Leningrad" would not meet with denial, though she might well meet with irritation ("that's what I said"). But in the parallel case, where a speaker in the know about the identity uttered (33) to a hearer also in the know, the claim that he meant (34) would not meet with denial either.

(33) Bob believes that Hesperus is not Phosphorus.

(34) Bob doesn't know that 'Hesperus' and 'Phosphorus' name the same planet.

If the claim that (13) really means (32) is all that needs to be said to explain the apparent difference between (13) and (13*), then surely the claim that (33) really means (34) is all that needs to be said to explain the apparent difference between (33) and (33*).

(13*) I've never been to St. Petersburg but I visited St. Petersburg last week.

(33*) Bob believes that Phosphorus is not Phosphorus.

Indeed, the position that this is all that needs to be said is that advocated by Howard Wettstein (1991). However, the question at hand is how is it that (33) means (34), and (13) means (32), while their counterparts (33*) and (13*) do not. The response of the naïve theorist is to claim that the sense in which (33) and (13) mean (34) and (32) respectively is the same sense in which one may be said to have meant the conversational implicatures of your utterance. The use of the word 'mean' in connection with the pragmatically determined conversational implications of an utterance was pointed out by Grice in his original papers on the topic, and the naïve view takes the consistent approach of treating all of our intuitions about differences between pairs such as (13) and (13*) and (33) and (33*) as a matter of these pragmatic implicatures. An advocate of the naïve view must, however, give an explanation of exactly what these pragmatic implicatures are, and this, as we have seen, is harder than it may appear.

Those who wish to defend the view that some explanation of the behaviour of names in propositional attitude contexts should be given face a different difficulty however. Advocates of neo-Fregean view on which *de re* senses are truth-conditionally irrelevant are committed to treating (13) and (13*) as having the same truth-value. Advocates of the hidden-indexical views have more resources for extending their account to these cases. However these treatments require a level of metaphysical commitment that many would feel uncomfortable with. More importantly, Moore and Forbes' use of the distinction between unenlightened contexts and enlightened ones commits them to providing a semantic account of the anti-substitution intuitions in the enlightened cases and a pragmatic account in the unenlightened ones. Thus advocates of these sorts of views must either defend a distinction between the simple sentences and the attitude contexts or one between enlightened and unenlightened contexts.

3.1 Weak intuitions

As mentioned above, it has been argued that the difference between attitude ascriptions and the simple sentences can be made out in terms of our willingness to accept the consequences of allowing the substitution in the two cases. On this view, we must explain the propositional attitude cases because our intuitions that pairs such as (33) and (33*) diverge in meaning is too strong. In the case of (13) and (13*) however, they suggest that our intuitions are weaker and that we more readily accept pragmatic explanations in terms of conversational implicatures. The question whether so much weight should be placed on the strength of our intuitions in this respect is one that I take up later. Leaving that question aside, however, I want to challenge the claim that the intuitions associated with the Saul examples are as weak as this strategy suggests.

As noted above, a speaker may well readily accept that what her utterance of (13) meant was that (32) was the case. However, we should not be misled by this. The utterer of (13) seems very unlikely to accept that what she *said* in uttering (13) was the same as what she would have said by uttering (13*). Instead she would no doubt maintain that (32) was not only what she meant, but also what she said. The situation is much different from one in which a speaker utters (34) while meaning (35), or (36) while meaning (37).

(34) I visited Darleen and Cherek.

(35) I visited Charleen and Derek.

(36) The essay is presented neatly.

(37) The content of the essay is poor.

In the case of (34) and (35) a speaker would happily acquiesce to the claim that (35) was not what they said, due to a slip of the tongue. And in the case of (36) and (37), the utterer of (36), when accused of saying (37) could reasonably (if somewhat legalistically) claim that (37) was not what they said, or for that matter protect themselves by saying "you said it, not me". My point here is not that our intuitions settle the matter, but that the intuitions associated with the Saul examples are not as weak as some might make out.

What about the apparent strength of our intuition that, to take Kripke's case, Pierre would vehemently deny that he believed that London was pretty, while all the while insisting that he did believe that *Londres est jollie*? Isn't this intuition much stronger than the intuition

that the author of a travelogue might deny that he every stood on the streets of Leningrad imagining the goose-stepping soldiers of Leningrad while insisting that he did indeed stand on the streets of St. Petersburg imagining the goose-stepping soldiers of Leningrad? It is not immediately transparent to me that the author in question would not deny that the former claim was false, if he had reason to believe that the hearer had genuinely misunderstood him to have visited Leningrad during the period of Soviet rule. The difference is that Pierre's ignorance of the identity of London and Londres means that he always has good reason to believe that someone who claims he thinks London is pretty has misunderstood. On the other hand, our travelogue author is aware of (and indeed exploiting) the co-referentiality of the names in question. We understand his utterance because we know that St. Petersburg is Leningrad. Further, the appropriateness of the utterance depends on the identity — it would be peculiar to pick up a travelogue in which the author stood in the streets of New York imagining the goose-stepping soldiers of Leningrad. However, the fact that we know about the identity means that it is possible for us to use the name 'Leningrad' without giving the author reason to think he has been misunderstood.

There are simple sentence counterexamples in which the identity is not required to be known and exploited but can be unknown—for example, Bezuidenhout's example in which a barbell which appears to be two barbells. Recall that in this case we are inclined to say that (31) is true but (31*) false.

(31) When the boy lifts this the light flashes.

(31*) When the boy lifts that the light flashes.

In these cases, a speaker ignorant of the identity would always have reason to think that you had misunderstood her if you claimed that she had said (31*), and so would protest vehemently, just like Pierre. Similarly, in the example of the police interview, it seems that Lois would be perfectly correct to refuse to sign a statement which contained (25*) rather than (25).

(25) Clark entered the phone booth, and then the building exploded, and then later Superman came out of the phone booth.

(25*) Clark entered the phone booth, and then the building exploded, and then later Clark came out of the phone booth.

To take a slightly different example, consider the case where I bet you \$50 that there will be a picture of Norma Jean Baker in a book titled *Monroe*. You are unlikely to be inclined to hand over the money when I point out the picture of Marilyn singing to President Kennedy. Nor will I convince you to pay by pointing out that Marilyn just is Norma Jean, even if you are a philosopher of language. You will no doubt reply that what I bet was that there would be a picture of Norma/Marilyn before she dyed her hair etc.²⁶ Of course, how we are able to say this is just the question at hand. Nevertheless, the conviction that I have not won the bet is just as strong as the conviction that someone who believes that Hesperus is Hesperus should not *ipso facto* be taken to have the belief that Hesperus is Phosphorus.

3.2 Parallel explanations

Saul has herself suggested that the problematic simple sentences offer a parallel set of anti-substitution intuitions, and thus provides additional support for the naïve view. She writes:

[t]he main argument against Salmon and Soames's theory has been that it requires the violation of our intuitions about substitution. But the current approach to substitution in simple sentences requires what is apparently a perfectly parallel violation of intuitions, accompanied by a perfectly parallel appeal to pragmatics. The advocate of this approach owes us a reason for supposing that one set of intuitions deserves to be taken so much more seriously than the other. Without such a reason, her objection to Salmon and Soames's approach loses much of its force (Saul 1997a, 107).

Stefano Predelli (1999) argues that it is a mistake to view a pragmatic treatment of SF in simple sentences as lending support to the naïve view of belief ascriptions. Predelli argues that a pragmatic treatment of SF in the simple sentences would not be parallel to the pragmatic treatment of attitudes offered by Salmon and Soames, since the defense in *Frege's Puzzle* depends crucially on the positing of the ternary relation BEL. Predelli claims that since

²⁶ It might seem on first glance that in this case the name 'Norma Jean Baker' does always pick out a certain time slice of Norma/Marilyn. However, reflection on the (original) lyrics of the Elton John song *Candle in the Wind* should convince you that we do sometimes use the name 'Norma Jean Baker' to pick out the individual Norma/Marilyn. In the song the name 'Norma Jean' seems to pick out the individual, and 'Marilyn Monroe' seems to pick out her public personae or aspect.

it implausible to think that a pragmatic explanation of SF in simple sentences will take the form of positing a ternary relation that is existentially generalized over, we should not view a pragmatic treatment of these cases as 'perfectly parallel, and not conclude that it gives support to the naïve view (Predelli 1999, 114).

Predelli is correct that the pragmatic explanation of SF in simple sentences is not perfectly parallel in that strong sense, since the simple sentences do not involve any relation (ternary or binary) in a systematic way. However I think that he is mistaken when he claims that what is controversial about the naïve view is not its disregard for speaker's intuitions but the claim that we systematically and mistakenly interpret belief attributions as making claims about the third relatum of BEL (Predelli 1999, 115). It is true that given Salmon and Soames' endorsement of the ternary view of belief their claim that belief ascriptions do not specify the third relatum has seemed particularly puzzling to some (see Oppy 1992). However, much of the resistance to the naïve view has rested on the claim that the speaker intuitions in question should not be overridden unless it is absolutely necessary. For example, in defending the hidden-indexical view Mark Richard writes:

Other than using bribery, threats, hypnosis, or the like, there is simply nothing you can do to get most people to say that Jones believes that Tully was an orator, once they know that Jones sincerely denies 'Tully was an orator', understands it, and acts on his denial in ways appropriate thereto. In particular, pointing out that Jones can express something he believes with 'Cicero was an orator' seems simply irrelevant to most people (Richard 1990, 125).

In as far as part of the motivation for opposing the naïve view is that it disregards a substantial set of speaker intuitions, a pragmatic treatment of the problematic simple sentences does weaken the case. The simple sentences involve a set of intuitions that are parallel in that they both involve the substitution of co-referential names. Advocates of HIT, the neo-Fregean views, and the indexical view of names all take the first set of intuitions seriously. If they do not give the second set equal weight Saul is right to demand an explanation of the difference.

4. *Scorekeeping*

It seems then that all the contemporary views discussed in chapter three face a number of difficulties. None of them can accommodate all our intuitions about attitude ascription,

since in they all face the same difficulties in giving an account of Lydia's utterance of (1) that gives the correct truth-conditions.

(1) No ancient astronomers believed that Hesperus is Phosphorus.

Furthermore, the same anti-substitution intuitions that appear in the propositional attitude cases arise in a number of simple sentences for both proper names and demonstratives. Accounts which accommodate the anti-substitution intuitions in the propositional attitude cases must either maintain that the two cases are relevantly different or attempt to accommodate them. Those who take the first option owe us an explanation of the difference, but it is hard to see what such an explanation could amount to. However, those who have attempted to take the second route find themselves defending a distinction which seems at least equally ad hoc—that between enlightened and unenlightened context.

Despite the difficulties it faces with sentences like (1), the naïve view seems to have an advantage in that it treats all our anti-substitution intuitions as the result of the same confusion about the difference between pragmatic and semantic aspects of what is communicated by an utterance. In chapter seven I will argue that this advantage is illusory—in fact the distinction between what is said and what is implied cannot be drawn in the way the naïve theory requires. First, however, I want to consider the suggestion that all these difficulties arise because Frege's treatment of quantification and reference underlies our approach to the semantics of natural language. Can alternate approaches to quantification solve the problems?

CHAPTER FOUR

Game-theoretic semantics and the new theory of reference

The common ground of both the naïve theory and hidden indexical accounts of proper names is endorsement of the new theory of reference (NTR), a theory which includes among its tenets:

such notions as direct reference, rigid designation, identity across possible worlds, the necessity of identity, a posteriori identities, singular propositions, essentialism about natural kinds, the argument from the failure of substitutivity in modal contexts that proper names are not equivalent to contingent definite descriptions, and related ideas and arguments (Smith 1995, 179).

Commitment to the idea that proper names are directly referential and thus are used to express singular propositions is part of what makes explanation of both propositional attitude contexts and the opaque simple sentences difficult. It is perhaps unsurprising therefore that the new theory of reference has itself come under attack as the source of the problem, particularly from Jaakko Hintikka and Gabriel Sandu (1995), who offer independence friendly logics and game-theoretic semantics as an alternative approach. In this chapter I wish to address two questions—are the arguments for the new theory of reference fallacious, as Hintikka and Sandu charge, and does game-theoretic semantics offer a viable alternative.

In what follows I discuss Hintikka and Sandu's arguments against the new-theory of reference and their alternate account of the semantics of natural language in terms of independence friendly logic and game-theoretic semantics. I argue that despite its independent interest the game-theoretic approach does not provide an adequate account of the behaviour of proper names. Furthermore, I argue that Hintikka and Sandu's criticism of the new theory of reference misunderstands some of the central arguments in favour of treating names as directly referential.

1. *Is the new theory of reference based on a fallacy?*

Hintikka and Sandu argue that Kripke's modal argument shows only that the bound variables of quantifiers must be 'rigid designators' or 'directly referential'. Apparent rigid designation by singular terms can, they suggest, be explained either in terms of scope or in terms of independence friendly logic. In Hintikka and Sandu's view the belief that modal considerations provide support for the thesis that the semantic content of a proper name is exhausted by its referent is based on two mistaken assumptions—first, the belief that natural language quantifiers should be given a substitutional account, and second, the metaphysical assumption that individuals are given to us prefabricated. The view of reference that stems from these assumptions is then further reinforced, they argue, by an inappropriate commitment to retaining the laws of first-order logic, the assimilation of different modes of cross-world identification, the doctrine that ostensive definition is *the* paradigm way of teaching the references of singular terms, and (except among the central figures involved in developing the theory), a certain degree of logical ignorance.

1.1 Modality and reference

Hintikka and Sandu identify issues connected with modality as the central considerations in favour of direct reference. It is a familiar fact that sentences containing modal operators seem to admit of two readings, commonly described as *de dicto* and *de re*. To take Hintikka and Sandu's example, suppose that one utters the sentence:

(1) Stefan knows that Marie Antoinette's lover is French.

If we give the operator 'know' a possible worlds analysis on which '*a* knows that *S*' has the import that in every possible world compatible with what *a* knows, *S* is true, (1) can be read in two distinct ways. We may take it to be saying that in every possible world compatible with what Stefan knows the person who is Marie Antoinette's lover *in that world* is French. On this *de dicto* reading, the phrase 'Marie Antoinette's lover' may pick out different individuals in different worlds in the set of worlds compatible with what Stefan knows.

Alternatively, we may give (1) a *de re* reading on which we take it to be saying that in every possible world compatible with what Stefan knows, the person who is Marie

Antoinette's lover *in the actual world* is French. On this reading, the phrase 'Marie Antoinette's lover' picks out the same individual in each world compatible with what Stefan knows (even if that individual is not her lover in that world). It is this reading which depends on us being able to use a term (say *b*) to pick out a single individual in all the relevant possible worlds, and this seems, as Hintikka and Sandu put it, to be "scarcely possible unless *b* refers to the same individual in all possible scenarios" (Hintikka and Sandu 1995, 248). That is, such reference depends on us being able to use some term or other to pick out the individual who is in fact Marie Antoinette's lover in each of the worlds compatible with what Stefan knows.

The expression of *de re* knowledge or necessity may thus, note Hintikka and Sandu, seem to require the possession of rigid designators, and, furthermore:

this rigid reference cannot be mediated by any contingent definite description. For such a description can always in principle refer to different individuals in different possible scenarios (Hintikka and Sandu 1995, 248).

However, as Hintikka and Sandu are quick to point out, this line of reasoning does not, by itself, provide reasons to posit the existence of a class of directly referential terms in natural language. Indeed, that it does not is made patently obvious by the fact that the example they chose can be explicated entirely in terms of possible worlds and the behaviour of the definite description 'Marie Antoinette's lover', which all parties will agree is neither a rigid designator nor directly referential—indeed, according to advocates of a Russellian account it is not even a proper singular term. The 'rigid designation' exhibited by 'Marie Antoinette's lover' in *de re* uses of (1) can be explicated entirely in terms of quantification and scope, under which analysis the *de re* reading of (1) has the logical form of (2).

(2) $\exists x (x = \text{Marie Antoinette's lover} \ \& \ \text{Stefan knows that } x \text{ is French})$

Quantification, as long as we have an independent account of it, provides all that is needed for the expression of rigidity. Rigid singular terms are on Hintikka and Sandu's view dispensable, and thus they conclude that the slogan of modal logicians should be "we do it with quantifiers" (Hintikka and Sandu 1995, 253).

If this is all the support that reflection on modal issues could provide for the NTR then Hintikka and Sandu would be right to reject this line of argument. However, I think this

analysis betrays a misunderstanding of the force of the modal argument, which provides a much more direct reason to regard proper names as directly referential than consideration of ascriptions of *de re* knowledge or *de re* necessity can provide. The modal argument, as I described it earlier, asks us to compare the modal profiles of sentences containing proper names in alternate possible worlds and contrast them with the modal profiles of sentences containing descriptions. The moral of that consideration was that for any description ϕ , the modal profile of (3) and (4) will differ.

(3) Arthur Prior ϕ ed.

(4) The ϕ ϕ ed.

Quantification and scope can provide no explanation of this phenomena, as there is no modal operator for the name to be outside the scope of.

Hintikka and Sandu's claim that quantification provides all the rigidity we need raises two questions—does quantification into modal contexts require a class of directly referential terms in natural language, and can the difference between (3) and (4) be explained without treating proper names as directly referential.

1.2 Quantification into modal contexts

The explanation of *de re* reference given by Hintikka and Sandu relies, as we have seen, on quantification into modal contexts. It is, on their view, no accident that the developers of the new theory of reference were themselves modal logicians concerned with the legitimacy of such quantification, as the possible worlds treatment of quantification into modal contexts immediately raises the question of cross-world identification. Consider (5).

(5) $\exists x \Box Px$

The standard clauses implicated in giving the truth conditions of (5) are as follows:

$\exists x\phi$ is true in a world w with respect to an assignment v iff there is an individual d in the domain of w such that ϕ is true in w with respect to an assignment v^* which differs from v only in that d is assigned as the value of x .

$\Box\phi$ is true in a world w with respect to an assignment v iff for every world w^* such that $wR w^*$, ϕ is true in w^* .

As can be seen, applying these clauses of the definition of truth successively to (5) will require re-identifying d in world w^* . As Hintikka and Sandu put it, quantification into modal contexts presupposes the existence of criteria of cross-identification. These criteria cannot themselves be explained in terms of quantification, on pain of (vicious) circularity, and so they certainly cannot be explained in terms of descriptions, as these themselves involve quantification (Hintikka and Sandu 1995, 249). Indeed, it seems as if the variables bound by quantifiers must exhibit a kind of direct referentiality, but here Hintikka and Sandu advise caution: "bound variables do not, in any literal sense, refer to anything at all. The rigidity and directness they exhibit is not a matter of reference, but of criteria of cross-identity" (Hintikka and Sandu 1995, 253).

More will be said about criteria of cross-world identification in what follows. Hintikka and Sandu's main conclusion, however, is that advocates of the NTR must have had some additional reason to think that quantifiers could not provide all the rigidity needed, and the obvious explanation is that they endorse a substitutional account of quantification. If the quantifiers of natural language are substitutional, then there must be a class of terms to serve as the substitution values of the variables, and these terms *must themselves be rigid designators*. Furthermore, since descriptions involve quantification, it would seem that the terms which serve as the substitution class cannot exploit descriptive content, but must be the Millian mere tag of the NTR.

The question of whether natural language quantification is substitutional, or can be interpreted as substitutional, is a complicated one. In what follows I will assume that Hintikka and Sandu are correct in rejecting a substitutional interpretation, and consider whether given this assumption their charge that the NTR is unfounded is correct.

1.3 Cross-world identification

Hintikka and Sandu commend the new theorists for their insight in seeing that quantification into modal contexts requires a kind of 'rigid designation' on the part of the bound variables and suggest that the mistake of extending this requirement to proper names is encouraged by an implicit endorsement of the substitutional account of quantification.

Nevertheless, they recognize that whatever the New Theorists' views on the correct account of quantifiers, the claim that proper names are directly referential is intended to be independent of a particular account of quantification. The issue then is what reasons other than the modal considerations could provide support for this view. Hintikka and Sandu identify two further ideas which they claim reinforce the 'myth' of directly referential singular terms. First, new theorists conflate two different modes of identifying objects; and second, NTR involves an unjustified metaphysical assumption about the nature of individuals (Hintikka and Sandu 1995, 263).¹

1.3.1 Modes of identification

Hintikka and Sandu claim that the NTR conflates two modes of identification, and that this conflation also contributes to the 'myth' of directly referential terms. On their view we do not have well-defined individuals independently of specifying criteria of identification, and two different sets of principles for identifying individuals across possible worlds will result in *two different sets of individuals*. Hintikka and Sandu maintain that there are two distinct modes of identification which play an important role in our semantical practices. The NTR, they charge, runs roughshod over the important distinction between perspectival or subject-centered identification and public or object-centered identification. Hintikka and Sandu have very little to say about the public mode of identification, except to note that it is implicated in the truth conditions of sentences like (6).

$$(6) \exists x K_a x = b$$

However the contrast to perspectival identification suggests that what is at issue is the (re)identification of physical objects on the basis of physical continuity. The perspectival mode of identification instead "relies on the subject's direct cognitive relations to persons, objects, places, times, events, etc" (Hintikka and Sandu 1995, 274). These direct cognitive relations serve to create what Hintikka and Sandu call a frame of reference for the second mode of identification. For example, in the case of seeing the frame of reference is my visual space, and an object can be cross-identified on the basis of its place in that space, even if I

¹ Hintikka and Sandu also posit a third factor—the doctrine that the paradigm case for teaching the references of singular terms is ostensive definition (Hintikka and Sandu 1995, 263).

have no further knowledge about who or what (in the public sense) that object is. Hintikka has proposed that we associate a second set of quantifiers (E and A) with this mode of identification while reserving traditional quantifiers for the public mode of identification (Hintikka 1975b). With these quantifiers in hand we can represent the claim that a sees d with (7).

$$(7) \text{Ex } K_a x = d$$

What (7) is meant to capture is the idea that d is clearly present in a 's visual space. It is true just in case one *visual object* is in all the scenarios compatible with a 's visual knowledge. Hintikka and Sandu maintain that this distinction occupies an important role in the use of all the epistemic modalities and is well recognized by cognitive scientists' distinctions between episodic and semantic memory and the where-system and the what-system (Hintikka and Sandu 1995, 275).

One characteristic feature of the perspectival mode of identification is its reliance on ostension, at least in the visual case. Hintikka and Sandu maintain that the New Theorists' use of ostension as a model for the direct reference attributed to proper names is a result of their conflation of the two kinds of identification.

The New Theorists have realized, however dimly, that there exists a mode of identification different from the garden-variety public mode of identification and irreducible to it, viz. The perspectival one. Unfortunately they have been preoccupied with reference rather than cross-identification. This has led them to postulate a special mode of reference which is independent of the usual public linguistic reference (276).

One of the mistakes brought about by this conflation of the modes of identification is the thought that the kind of reference associated with ostension is what is operative in the *de re* or rigid uses of singular terms. This is a mistake, Hintikka and Sandu suggest, because once we have the notion of modes of cross-world identification and the associated quantifiers in hand we can see that the *de re/de dicto* distinction cuts across the perspectival/public one. The quantificational explanation of the *de re/de dicto* distinction applies equally well to the perspectival quantifiers E and A . Since ostensive or perspectival reference is not inherently *de re*, it cannot serve as a model for direct reference.

1.3.2 Metaphysics and individuals

The notion of a perspectively identified object is important because it illustrates one of the basic areas of disagreement between Hintikka and Sandu and the new theorists. In Hintikka and Sandu's view a visual object has just as good a claim to the status of metaphysically significant individual as does a public identified physical object, even when that object is identified with different publicly identified objects in different possible worlds. In their view individuals are constructed relative to our interests (postfabricated) rather than given to us (prefabricated).

The unfounded metaphysical assumption that Hintikka and Sandu charge the NTR with is the postulation of a prefabricated fixed store of individuals and a store of proper names by which we can refer to them. It is this postulation that they take to be the central point of Kripke's claim in *Naming and Necessity* that cross-world identification is not problematic—that rather than 'discovering' alternate possibilities and then determining who is who, we stipulate the alternate possibilities, and thus stipulate the identities involved:

A possible world is *given by the descriptive conditions we associate with it*. ... Why can't it be part of the *description* of a possible world that it contains *Nixon* and that in that world *Nixon* didn't win the election? It might be a question, of course, whether such a world *is* possible. (Here it would seem, *prima facie*, to be clearly possible.) But, once we see that such a situation is possible, then we are given that the man who might have lost the election or who did lose the election in this possible world is Nixon, because that's part of the description of the world. 'Possible worlds' are *stipulated*, not *discovered* by powerful telescopes. There is no reason why we cannot *stipulate* that, in talking about what would have happened to Nixon in a certain counterfactual situation, we are talking about what would have happened to *him* (Kripke 1980, 44).

That is, on Kripke's view, the question of cross-world identity is not a genuine one. I do not describe an alternate possible world and then determine whether a given man in that world is Nixon or not. Whether he is Nixon or not is part of the description of the world.

One difficulty for Hintikka and Sandu's account is that it is unclear how the notion that possible worlds are stipulated rather than discovered commits one to denying that there can be postfabricated individuals. As an interpretation of Kripke's discussion of stipulation this

seems implausible. Kripke emphasizes that possible worlds are as we describe them, and this seems to legitimate descriptions in terms of different modes of identification, rather than rule them out. It seems that Kripke's possible worlds may be inhabited by whatever individuals we can consistently describe. The question of whether perspectivally identified and publicly identified objects have equal claim to the status of individuals does not seem to rest on the correct answer to the question of whether we stipulate or discover cross-world identifications.

1.3.3 Branching and lines of identification

A more important area of disagreement between the NTR and Hintikka and Sandu is the question of whether it makes sense to speak of the lines of identification branching or not. The commitment of the NTR to the necessity of identity is what is at issue here, and the notion that possible worlds are stipulated is not, by itself, sufficient for the necessity of identity. Even if we assume that *a* and *b* are rigid designators which are co-referential in the actual world, this only implies that the identity statement '*a* = *b*' is necessary when it is combined with the claim that the lines of identification *do not branch* (Hintikka and Sandu 1995, 268-269). In order to be a rigid designator a term must refer to the same thing in every possible world—that is, its reference must follow the lines of identification between worlds. If those lines of identification branch, then rigid designators which are co-referential in this world may not be co-referential in every world.

Hintikka and Sandu suggest that the advocates of the NTR fail to consider this possibility because of the alleged commitment to the existence of a fixed store of individuals out of which possible worlds are constructed. However, if the store of individuals is not the individuals of the actual world, but is the set of individuals such that we can describe, specify, or imagine them, then it is not clear that this prevents branching. The assumption that there is no branching is really an assumption about the principles of identification that is independent of the question of whether there is a fixed pool of individuals.

One important application of the distinction between the two modes of identification is in sentences which identify perspectivally identified objects with public identified ones, as in (8), (9), and (10).

(8) It is now six o'clock.

(9) That man is Saul Kripke.

(10) I am Quentin Smith.

Because of the difference between the two modes of identification, these identities are on Hintikka and Sandu's view contingent.

More important for our purposes however is that the idea of a rigid designator must, if Hintikka and Sandu are correct, be interpreted relative to a particular mode of cross-world identification. In (10), both 'T' and 'Quentin Smith' may be operating as rigid designators without the identity in (10) being necessary as long as they are rigid designators relative to different modes of identification. The doctrine that all identities between rigidly designating terms are necessary depends on one of two states of affairs obtaining. One way in which it could be true is if there is just one mode of identification and thus just one set of postfabricated individuals. Alternatively, identities between rigidly designating terms will be necessary if all the rigidly designating terms are associated with a single mode of identification.

1.3.4 Descriptivism

Whether the principles of cross-world identification branch or not, the NTR has as one of its central doctrines a view about how cross-world identification does *not* occur. According to the NTR descriptive considerations or conceptual content definitely do not have a role to play. Hintikka and Sandu maintain that there is no support for the view that alleged rigid designators cannot have their reference fixed descriptively. They make two points about the arguments against the description theory of proper names (Hintikka and Sandu 1995, 267). First, they note that we would be unable to find a description $\iota x Bx$ that specifies the individual b in every possible world if the lines of cross-world identification are drawn even partly by other means (they nominate continuity considerations as the other component (Hintikka and Sandu 1995, 268)).

Secondly, even if the lines of cross-world identification are drawn entirely in terms of descriptive criteria (i.e., if there is some definable set of attributes B such that whatever possesses them is b), since descriptions rely on quantifiers and the quantifiers themselves rely on cross-world identification, we will not be able to express these descriptive criteria in terms of a description $\iota x Bx$. In Hintikka and Sandu's view the standard clause for the truth-conditions of such a sentence rely on us already having specified the principles of individuation.

$\iota x Bx \phi$ is true in a world w with respect to an assignment v iff

- (a) there is exactly one individual d in the domain of w such that Bx is true in w with respect to an assignment v^* which differs from v only in that d is assigned as the value of x , and;
- (b) ϕ is true in w with respect to v^* .

Hintikka and Sandu conclude that there cannot be an object language account of the principles of cross-world identification, but deny that this means that there is non-descriptive reference by proper names or any other terms (Hintikka and Sandu 1995, 268). This of course allows us to extrapolate their response to the problem raised by the difference in modal profile between (3) and (4).

(3) Arthur Prior ϕ ed.

(4) The ϕ ϕ ed..

The name Arthur Prior will on their view pick out an individual who is cross-identified by means of either (a) descriptive criteria plus some other considerations or (b) purely descriptive criteria, but in neither case will an description of the form 'the ϕ ' serve to express those criteria, as its meaning depends on the prior existence of the principles of identification.

1.4 Why refer directly?

As Hintikka and Sandu see it, once we let go of the implicit reliance on substitutional quantification the notion of direct reference by proper names (or other singular terms) does no theoretical work. It is not needed to explain *de re* reference, as that is adequately accounted for by quantifiers. Rigid designation (i.e., *de re* reference) is not a kind of reference at all, but the consequence of treating a singular term as having wide scope. Quantifiers and their associated variables rely on cross-world identification rather than reference, and directly referential singular terms fail as an explanation of this identification because they themselves rely on the same principles of identification. Direct reference to an individual depends on having a well-defined referent, and individuals are themselves defined in terms of principles of cross-world identification. Finally, the notion that ostensive reference provides a model or an explanation of direct reference by singular terms is mistaken. Once we understand that

ostension gains its apparently special nature from its role in perspectival identification, and realize that the *de re/de dicto* distinction cuts across the perspectival/public distinction, the temptation to equate ostension with a particular kind of *reference* is overcome.

There is however one further consideration in favour of treating names as directly referential that Hintikka and Sandu do take seriously. Accounting for *de re* reference in terms of quantification and scope may seem to leave them open to the charge that while they have explained one means by which *de re* reference may occur, they have not explained how it is that names achieve such *de re* reference. After all, the objector may point out, (12) does not resemble (11), even if it somehow captures its logical force (when (11) is given a *de re* reading).

(11) John knows that Mary enjoyed studying philosophy.

(12) $\exists x (x = \text{Mary} \ \& \ K_{\text{John}} (x \text{ enjoyed studying philosophy}).$

Indeed, the differences in modal profile between (3) and (4) serve to reinforce this line of argument.

(3) Arthur Prior ϕ ed.

(4) The ϕ ϕ ed.

The idea that definite descriptions presuppose the principles of identification (via quantification) and so cannot elucidate those principles may well be correct, but one is still entitled to wonder why it is that names behave so differently, given that they too are supposed to presuppose principles of identification. Hintikka and Sandu may be right that we do not *need* to have a class of directly referential terms in natural language in order to make *de re* reference and quantification possible, but, says the defender of the NTR, as a matter of fact we do have such a class. In natural languages proper names accomplish *de re* reference in virtue of being directly referential, though a language in which they didn't is logically possible.

Hintikka and Sandu maintain that the claim that (11) and (12) do not seem alike, even if the latter captures the force of the former, relies overly much on the surface form of both natural and formal languages, and they do not consider examples of the form of (3) and (4). We can, they suggest, simply regard (12) as the logical form of the *de re* reading of (11). As it

turns out, however, on Hintikka and Sandu's preferred approach to the semantics of natural language we do not have to accept that the logical form of (11) is (12). While the quantifier and scope explanation of *de re* reference is adequate, a more general account may be had in terms of game-theoretic semantics and informational independence.

2. Independence friendly logics

Hintikka and Sandu's argument that the primitive data of the NTR—*de re* reference—can be adequately accounted for without positing a class of directly referential terms has not to this point depended on any rejection of the dominant approach to natural language semantics or the underlying logic of natural languages. It is rather a form of Ockham's razor. The positing of the special semantical class is, they suggest, an ontological excess which provides no additional explanatory power. In this light, the reply that emphasizes the apparent differences between (11) and (12) can be seen as making two points. First of all, by drawing our attention to the claim that (12) captures the force of (11) without explaining how or why (11) has that force, the defender of the NTR is maintaining that the positing of a class of directly referential terms does have additional explanatory power, though this power is not to be found in the giving of correct truth conditions or correct meaning but in the explication of how the meaning of a sentence is a function of the meaning of its parts.² Secondly, by emphasizing the distance between the form of (11) and (12), they are drawing our attention to a theoretical virtue of the NTR. If proper names are directly referential then we have to hand a *simple* explanation of the semantical force of (11). Thus, even if one is not moved by the first point, the new theorist may be able to claim a theoretical standoff in which we must choose between ontological parsimony and explanatory elegance.

This is not the end of the story, however, as Hintikka and Sandu do have at their disposal an alternative theory which endeavors to provide a simple explanation of how names can manifest so-called *de re* reference. This alternative theory rests on two ideas—*independence friendly logic* and *game-theoretic semantics*.

² This move may have unanticipated consequences, as it commits the new theorist to endorsing as superior theories which give a better explanation of either the relationship between the linguistic meaning of the parts of a sentence and the linguistic meaning of the sentence as a whole or that between the linguistic meaning of the sentence and the meaning of any given utterance of that sentence. In particular, I think that advocates of the naïve theory may want to reject this strand of argument and focus on the second.

2.1 Scope and binding

In ordinary first-order logic the idea of quantificational scope serves two purposes. First of all, it serves to indicate which variables are bound by which quantifiers. Secondly, it serves to indicate which quantifiers are dependent on which quantifiers. It is a difference in quantifier dependence which separates the no doubt true (13) from the exceedingly unlikely (14), for example.

$$(13) \forall x \exists y (x \text{ has seen } y)$$

$$(14) \exists y \forall x (x \text{ has seen } y)$$

What is said in (13) is that for every individual (call them x) there is some object (call it y) such that x has seen y . In contrast, (14) asserts that there is an object (call it y) such that every individual has seen it. In the case of (14), we want to say that the choice of the value of y which makes it true depends upon what value has been chosen for x . Both Hintikka himself (1996) and Warren Goldfarb (1979) have argued that these dependence relations lie at the heart of first-order logic. Standard practice is to indicate dependence via the same notation as we indicate the binding-scope of the quantifier—by means of brackets. Each quantifier Q_1 comes with a set of brackets indicating its scope, and any other quantifier Q_2 falling within the brackets is dependent on Q_1 .

This linear notation is not without its limits, however, and quantifiers with relations of dependence inexpressible in first-order logic have been studied under the name 'branching quantifiers' since Henkin (1961). Some formulas of the resulting logic of partially ordered quantifiers follow.

$$(15) \begin{array}{l} \exists x \\ \quad \searrow \\ \quad \quad S[x, y] \\ \quad \nearrow \\ \forall y \end{array}$$

$$(16) \begin{array}{l} \forall z \exists x \\ \quad \searrow \\ \quad \quad S[x, y, z] \\ \quad \nearrow \\ \forall y \end{array}$$

$$(17) \begin{array}{l} \forall x \exists u \\ \forall y \exists w \end{array} \rightarrow S[x, y, u, w]$$

In the case of (15), the choice of the value for x is independent of that for y . Thus (15) can easily be seen to be equivalent to (18) in standard first-order logic.

$$(18) \exists x \forall y S[x, y]$$

Similarly, (16) is equivalent to (19).

$$(19) \forall z \exists x \forall y S[x, y, z]$$

In case of (17), however, there is no equivalent in ordinary first-order logic. The requirement that $\exists u$ be independent of $\forall y$ but dependent on $\forall x$ cannot be met simultaneously with the requirement that $\exists w$ be independent of $\forall x$ but dependent on $\forall y$.

2.2 Independence friendly logic

Both Hintikka and Sandu have argued that branching quantifiers should be seen as an instance of a more general phenomena, that of informational independence. The essence of (17) is, they argue, the idea that the choice of the value of u should be made in ignorance of the value chosen for y (so that the choice for u could easily be made first) but in full knowledge of the value chosen for x (and *ceteris paribus* for w).

Hintikka has introduced an alternative slash notation for independence. With this notation we allow the usual ordering and bracketing of first order logic to indicate dependence, but supplement it with punctuation indicating that a quantifier which would normally be dependent on a preceding quantifier is in fact independent of it. This is done by following the quantifier by a slash and then the quantifier which it is independent of. Using this notation (15) can be represented by (20), (16) by (21), and (17) by (22).

$$(20) \forall y (\exists x / \forall y) S[x, y]$$

$$(21) \forall y \forall z (\exists x / \forall y) S[x, y, z]$$

$$(22) \forall x \forall y (\exists u / \forall y) (\exists w / \forall x) S[x, y, u, w]$$

The idea of information independence need not be restricted to quantifiers. Any connective can be understood as informationally independent of any other. Thus, an independence friendly logic will also allow expressions like (23)-(25).

$$(23) \forall x (Ax (\vee / \forall x) Bx)$$

$$(24) (A_1 (\vee / \&) A_2) \& (B_1 (\vee / \&) B_2)$$

$$(25) \forall x \forall y ((A_1[x, y] (\vee / \forall x) A_2[x, y]) (\vee / \forall y) (B_1[x, y] (\vee / \forall x) B_2[x, y]))$$

(For discussion of what these amount to see section 3.2.2 and Sandu 1998) This perfectly general notion of independence can be invoked to provide a reading for (11) that preserves its surface form but is logically equivalent to (12).

$$(26) K_{\text{John}} ((\text{Mary} / K_{\text{John}}) \text{ enjoyed studying philosophy}).$$

This formulation of course implies that there is some choice to be made with respect to the term 'Mary' in order for us to make sense of the idea that it is independent of the knowledge operator. Hintikka and Sandu's view is that in natural languages this is precisely the case. Understanding what this choice amounts to, however, requires understanding the general semantic framework which Hintikka and Sandu wish to apply to natural language—game-theoretic semantics.

3. *Game-theoretic semantics*

Game-theoretic semantics (GTS) is an approach to natural languages that finds its inspiration (if not endorsement) in the Wittgensteinian notion of a language game. The basic idea is that the meaning of a sentence is to be explained by an abstract semantical game, and that the meaning of any given linguistic unit is to be explained in terms of the game rules connected with it. The technical apparatus of game-theory is combined with that of model-theoretic semantics to produce a formal treatment of the intuitive idea of a language game. In

order to further explicate this idea, I will give the rules for the familiar case of classical first-order logic.

3.1 GTS for first-order logic

In GTS for a first-order language L the truth definitions are (as expected) given relative to a model \mathbf{M} . The atomic sentences are given their usual truth definition relative to the assignment of members of the domain of \mathbf{M} to the constants of L and subsets of the domain of \mathbf{M} to the predicate letters of L . This assignment is then extended to give a valuation V to all the sentences of L as follows. Associated with each sentence S is a zero-sum³ two person game $G(S)$ between players we will designate as \mathbf{t} and \mathbf{f} .⁴ Each play of $G(S)$ consists of a sequence of applications of the game rules to input sentences. Each application of a rule results in an output sentence. S is the input sentence for the first application of a rule in the game $G(S)$; for following rules, the output of the immediately previous application of a rule serves as input. The rules are constructed so that after a finite number of applications of rules in a play of $G(S)$ an atomic sentence A is reached. The game rules are given in terms of two roles: T (also: Myself, the Verifier) and F (also: Nature, the Falsifier). At the beginning of each play \mathbf{t} has the role T and \mathbf{f} the role F, though they may switch in the course of the play. The win conditions are as follows:

Player \mathbf{t} wins iff either:

- (a) \mathbf{t} has the role T and $v(A) = 1$; or
- (b) \mathbf{f} has the role T and $v(A) = 0$

Player \mathbf{f} wins otherwise.

The rules for the connectives of first order logic are:

³ A zero-sum game is one in which if you add the values representing the outcomes for all the players the total is zero. Intuitively the idea is that, in the two person case, the game has a winner and a loser.

⁴ Writers on GTS often identify the players merely in terms of the roles they play. Michael Hand introduced the separation of the players from their roles as part of a neutral terminology for GTS (1989). I have adopted that neutral terminology here. Hand's interest is in separating GTS as a technical device for semantics from the Wittgensteinian idea that the meanings of sentences are constituted by speakers playing the language-games of GTS.

- (R. \vee) If play reaches a sentence of the form $(S_1 \vee S_2)$, T selects S_i (where $i \in \{1,2\}$) and play continues with respect to S_i .
- (R.&) If play reaches a sentence of the form $(S_1 \& S_2)$, F selects S_i (where $i \in \{1,2\}$) and play continues with respect to S_i .
- (R. \exists) If play reaches a sentence of the form $\exists x S[x]$, T selects a member of the domain d , and play continues with respect to the sentence $S[\alpha]$ and the model $\mathbf{M}_{(d,\alpha)}$ (where the constant α does not occur in $\exists x S[x]$).⁵
- (R. \forall) If play reaches a sentence of the form $\forall x S[x]$, F selects a member of the domain d , and play continues with respect to the sentence $S[\alpha]$ and the model $\mathbf{M}_{(d,\alpha)}$ (where the constant α does not occur in $\forall x S[x]$).
- (R. \neg) If play reaches a sentence of the form $\neg S$ then **t** and **f** switch roles, and play continues with respect to S .

A *strategy* for a player in a semantical game gives (roughly) a set of instructions telling the player how to move in response to moves by the other player. Call a strategy for **t** a **t**-strategy and one for **f** an **f**-strategy. Truth-in-a-model is defined not relative to any particular play of a game, but in terms of the strategies available:

$V(S) = 1$ iff there is a winning **t**-strategy for $G(S)$.

$V(S) = 0$ iff there is a winning **f**-strategy for $G(S)$.

⁵ Hintikka and other writers on GTS frequently omit the model shifting aspect of (R. \exists) and (R. \forall) in favour of formulations such as:

(R. \exists^*) If play reaches a sentence of the form $\exists x S[x]$, T selects a member of the domain d . If the name of this individual is b the game continues with respect to $S[b]$.

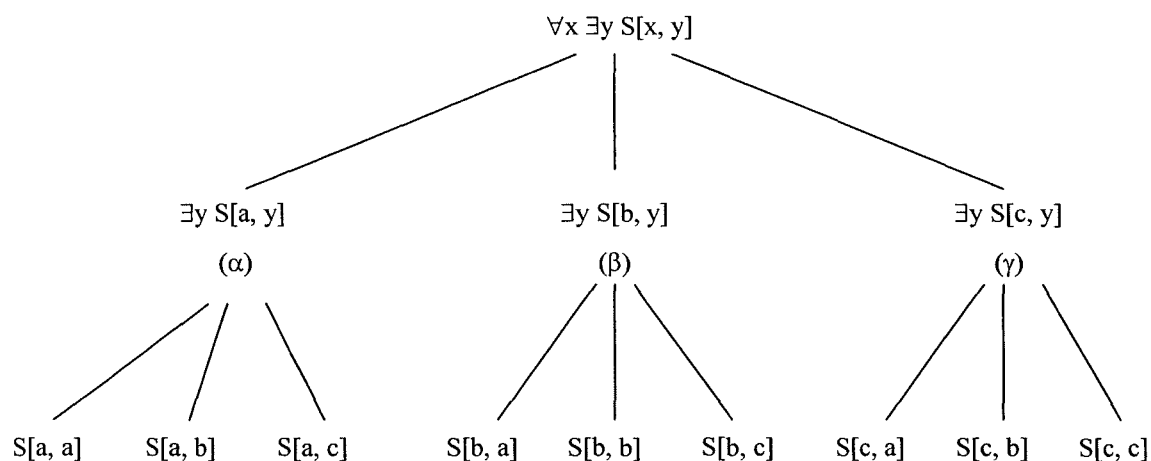
(See for example Hintikka 1996, 25.) Hintikka later suggests that b need not be a name of L , and his formulations of the rules for natural language sometimes instruct T to name the individual chosen should they not be named. Assuming that the quantification of GTS is to be objectual these devices must be taken to amount to the alternate model device used above, but are considerably less clear. Moreover, (R. \exists^*) combined with the name-need-not-be-in- L provision leaves unspecified the appropriate course of action should d fail to have a name in any language. All in all, the formulation I have used seems preferable.

For standard first-order logic the GTS truth-conditions are equivalent to their Tarski-type counterparts [ref]. Their real versatility is in dealing with extensions to first order logic, such as the independence-friendly logic discussed above.

3.2 GTS and information

One basic component of game theory is the distinction between games of full information and partial information. Chess, in which one has knowledge of all of the opponent's prior moves, is an example of the former, and poker, in which one is ignorant of the cards held by other players, one of the later. Accordingly, a game theorist might well ask whether semantical games are games of full information or not. Classical first-order logic assumes full information. Consider, for example, the game for $\forall x \exists y S[x, y]$, represented in standard tree form. For convenience we will consider a finite covered domain of three individuals.⁶

$G(\forall x \exists y S[x, y])$



Since $\exists y$ is within the scope of $\forall x$, t knows which one of α , β , or γ they are at when they make the choice of an individual with which to instantiate $\exists y$. They have full information about the move made by f . Accordingly, a winning strategy for t will tell them which individual to choose *given the individual chosen by f* . In other words, the winning strategy

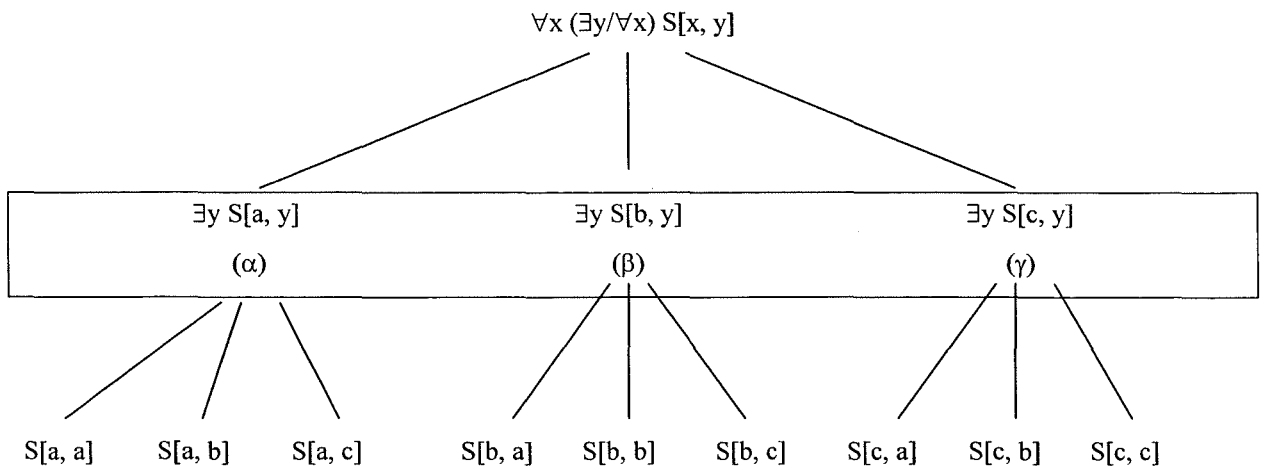
⁶ i.e., the domain is composed of three individuals all of whom are assigned a name by the model.

corresponds to a two-place function defined for each individual in the domain. There is a winning strategy for **t** just in case (27) is true.

$$(27) \exists f \forall y S[f(y), y]$$

However, it is an simple matter to vary the situation so that the player does not have this information. This gives us the game for (20):

$$G(\forall x (\exists y/\forall x) S[x, y])$$



The box represents the fact that **t** does not know which of α , β , or γ they are at. Accordingly, a winning strategy for **t** must tell them which individual to choose regardless of which individual was chosen by **f**. This gives us the previously noted equivalence of (20) and (18).

$$(18) \exists x \forall y S[x, y]$$

One thing to notice is that GTS has been extended to cover the independence-friendly first-order logic without any modification in the rules or the truth-definition. In contrast, Tarski-type truth-definitions cannot be given for independence-friendly first-order languages (Sandu 1998; Hintikka 1996). Furthermore, since each rule for an operator corresponds to a choice by one or another player, the notion of informational independence extends naturally to the other operators. With GTS in hand it is easy to see that (23) is equivalent to (28).

$$(23) \forall x (Ax (\vee/\forall x) Bx)$$

$$(28) (\forall x Ax) \vee (\forall x Bx)$$

A winning strategy for (23) must tell t which disjunct to choose regardless of which individual has been chosen by f . There can only be such a strategy if (28) is true.

3.2.1 When independence matters

Cases such as that of (22), which has no ordinary first-order equivalent, are also handled smoothly by GTS, and indeed are thus given a clear truth condition. We can see this by working through the tree for (22) in a domain of three individuals.

$$G(\forall x \forall y (\exists u/\forall y) (\exists w/\forall x) S[x, y, u, w])$$

$\forall x \forall y (\exists u/\forall y) (\exists w/\forall x) S[x, y, u, w]$		
$\forall y (\exists u/\forall y) (\exists w/\forall x) S[a, y, u, w]$	$\forall y (\exists u/\forall y) (\exists w/\forall x) S[b, y, u, w]$	$\forall y (\exists u/\forall y) (\exists w/\forall x) S[c, y, u, w]$
$\neg (\exists u/\forall y) (\exists w/\forall x) S[a, a, u, w]$ (α_1)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[b, a, u, w]$ (α_2)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[c, a, u, w]$ (α_3)
$\neg (\exists u/\forall y) (\exists w/\forall x) S[a, b, u, w]$ (β_1)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[b, b, u, w]$ (β_2)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[c, b, u, w]$ (β_3)
$\neg (\exists u/\forall y) (\exists w/\forall x) S[a, c, u, w]$ (γ_1)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[b, c, u, w]$ (γ_2)	$\neg (\exists u/\forall y) (\exists w/\forall x) S[c, c, u, w]$ (γ_3)

...

We begin with the two choices made by f . The first choice for t is to instantiate the existential quantifier $\exists u$. The independence of this quantifier from $\forall y$ but not from $\forall x$ is captured by the fact that t makes this choice knowing which column he is in (i.e., knowing whether he is in the set of positions marked by subscript 1, 2, or 3), but without knowing which row he is in (i.e., without knowing whether he is at α , β , or γ).

$G(\forall x \forall y (\exists u/\forall y) (\exists w/\forall x) S[x, y, u, w])$ continued.

...		
$(\exists w/\forall x) S[a, a, a, w]$ (α_1)	$(\exists w/\forall x) S[b, a, a, w]$ (α_2)	$(\exists w/\forall x) S[c, a, a, w]$ (α_3)
$(\exists w/\forall x) S[a, a, b, w]$ (α_4)	$(\exists w/\forall x) S[b, a, b, w]$ (α_5)	$(\exists w/\forall x) S[c, a, b, w]$ (α_6)
$(\exists w/\forall x) S[a, a, c, w]$ (α_7)	$(\exists w/\forall x) S[b, a, c, w]$ (α_8)	$(\exists w/\forall x) S[c, a, c, w]$ (α_9)
...		
$(\exists w/\forall x) S[a, b, a, w]$ (β_1)	$(\exists w/\forall x) S[b, b, a, w]$ (β_2)	$(\exists w/\forall x) S[c, b, a, w]$ (β_3)
$(\exists w/\forall x) S[a, b, b, w]$ (β_4)	$(\exists w/\forall x) S[b, b, b, w]$ (β_5)	$(\exists w/\forall x) S[c, b, b, w]$ (β_6)
$(\exists w/\forall x) S[a, b, c, w]$ (β_7)	$(\exists w/\forall x) S[b, b, c, w]$ (β_8)	$(\exists w/\forall x) S[c, b, c, w]$ (β_9)
...		
$(\exists w/\forall x) S[a, c, a, w]$ (γ_1)	$(\exists w/\forall x) S[b, c, a, w]$ (γ_2)	$(\exists w/\forall x) S[c, c, a, w]$ (γ_3)
$(\exists w/\forall x) S[a, c, b, w]$ (γ_4)	$(\exists w/\forall x) S[b, c, b, w]$ (γ_5)	$(\exists w/\forall x) S[c, c, b, w]$ (γ_6)
$(\exists w/\forall x) S[a, c, c, w]$ (γ_7)	$(\exists w/\forall x) S[b, c, c, w]$ (γ_8)	$(\exists w/\forall x) S[c, c, c, w]$ (γ_9)

...

At this point, t knows which group of rows he is at (i.e., α , β , or γ), but not what column or exactly what row he is in. This represents his knowledge of the move made for $\forall y$ and his

ignorance of the move made for $\forall x$ (and thus of course of his move for $\exists u$).⁷ Without finishing the tree we can now see that in order for t to have a winning strategy for (22), (29) must be true.

$$(29) \exists f \exists g \forall x \forall y S[x, y, f(x), g(y)]$$

That is, the strategy must tell t which value to choose for u based on the value of x , and which value to choose for w based on the value of y .

3.2.2 When independence doesn't matter

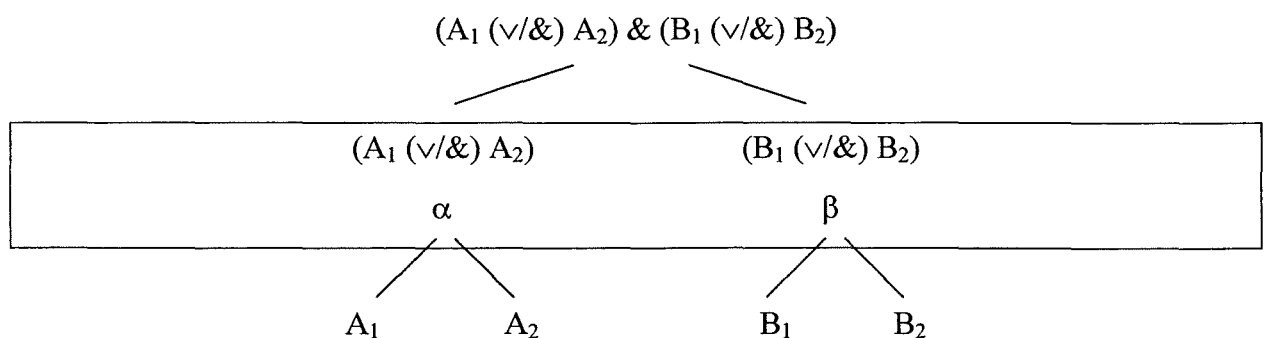
Sometimes two formulas identical except for the dependence relations between the operators turn out not to be different at all. Such is the case with (24), which turns out to be logically equivalent to (24*).

$$(24) (A_1 (\vee/\&) A_2) \& (B_1 (\vee/\&) B_2)$$

$$(24^*) (A_1 \vee A_2) \& (B_1 \vee B_2)$$

To see this, consider the game tree for (24).

$$G((A_1 (\vee/\&) A_2) \& (B_1 (\vee/\&) B_2))$$



⁷ Of course, for this to be a humanly playable game we must imagine that either the 'player' t is actually composed of two human beings, each responsible for a different move and privy to different information, or that the game is played by declaring the strategies ahead of time and then playing mechanically in accord with them.

Since t doesn't know which of α or β he is at, he must make a choice for each one. Thus he must have a strategy that tells him which pair to pick from among (A_1, B_1) , (A_1, B_2) , (A_2, B_1) and (A_2, B_2) . However, this is the same strategy that he must have for the sentence $(A_1 \& B_1) \vee (A_1 \& B_2) \vee (A_2 \& B_1) \vee (A_2 \& B_2)$. And this is equivalent to the formula $(A_1 \vee A_2) \& (B_1 \vee B_2)$ —in other words, to (24*), the same formula as (24) except that the disjunctions are not treated as independent of the conjunction. In this case, informational independence makes no difference.

4. *Natural languages, GTS, and names*

Branching quantifiers, and indeed the notion of information independence in general, form an important part of Hintikka's advocacy of GTS as an approach to the semantics of natural language. For our purposes however, the focus will be on the role of informational independence in the treatment of proper names. Hintikka's view is that in natural languages the game rules must include a rule for proper names. As a consequence, it is possible to ask whether the application of the rule to a proper name is made independently of other rules or not. Names will exhibit *de re* reference, argue Hintikka and Sandu (1995, 260-262), when the application of the name rule is informationally independent of the modal operator. Accordingly, (11) should be represented as having the logical form of (13).

(11) John knows that Mary enjoyed studying philosophy.

(12) $\exists x (x = \text{Mary} \& K_{\text{John}} (x \text{ enjoyed studying philosophy}))$.

(26) $K_{\text{John}} ((\text{Mary}/ K_{\text{John}}) \text{ enjoyed studying philosophy})$.

Unlike (12), the form of (26) is very similar to that of (11). Nevertheless, claim Hintikka and Sandu, (12) and (26) are logically equivalent to each other. We can explain how (11) can have the force of (26) by means of the informational independence of 'Mary' from 'John knows'. Thus, they argue, we have an explanation of how (11) can come to have the force of (12).

4.1 Rules for natural language

The application of GTS to natural languages raises some issues that don't arise in the formal case—most importantly, the issue of rule ordering alluded to above. The rules for the

connectives of first-order logic are unambiguous about which rule is to be applied at any given point of the game, as the appropriate rule is determined by the unambiguous logical form of the sentence under consideration. Natural language, with its less than transparent and frequently ambiguous logical form, introduces further complications. To see how this works, let us consider some game rules for English.

(R.or) If play reaches a sentence of the form

$$S_1 \text{ or } S_2$$

T selects S_i ($i = 1, 2$) and play continues with respect to S_i .

(R.and) If play reaches a sentence of the form

$$S_1 \text{ and } S_2$$

F selects S_i ($i = 1, 2$) and play continues with respect to S_i .

(R.not) If play reaches a sentence of the form

$$\text{neg } S$$

then **t** and **f** switch roles, and play continues with respect to S .

(R.some)⁸ If play reaches a sentence of the form

$$X \text{ — } [\text{NP Some } Y ([\text{S}' \text{ who}_i [\text{S } Z \text{ — } e_i \text{ — } Z']])] \text{ — } W$$

T selects an individual, say b , and play continues with respect to

$$X \text{ — } b \text{ — } W, \text{ if } b \text{ is a } Y \text{ (and } Z \text{ — } b \text{ — } Z')$$

(R.every) If play reaches a sentence of the form

$$X \text{ — } [\text{NP Every } Y ([\text{S}' \text{ who}_i [\text{S } Z \text{ — } e_i \text{ — } Z']])] \text{ — } W$$

F selects an individual, say b , and play continues with respect to

$$X \text{ — } b \text{ — } W, \text{ if } b \text{ is a } Y \text{ (and } Z \text{ — } b \text{ — } Z')$$

(R.any) If play reaches a sentence of the form

$$X \text{ — } [\text{NP Any } Y ([\text{S}' \text{ who}_i [\text{S } Z \text{ — } e_i \text{ — } Z']])] \text{ — } W$$

⁸ Throughout the quantifier rules will be stated in terms of 'who'. The versions for "that", "which", "where", "when" etc are analogous. The use of different phrases goes with different constraints on the realm of choice, but that issue can be safely ignored in what follows.

F selects an individual, say b , and play continues with respect to

$$X \text{ — } b \text{ — } W, \text{ if } b \text{ is a } Y \text{ (and } Z \text{ — } b \text{ — } Z')$$

The reader will have noted that the rule for 'any' is identical to the rule for 'every'. In ordinary English, however, the force of these two words is often different. Consider, for example, the difference between (30) and (31).

(30) Richard does not date every girl.

(31) Richard does not date any girl.

GTS operates with a number of ordering principles which guide the application of the game rules. The important one for (30) and (31) is (O.L.R).

(O.L.R) In one and the same clause, game rules are applied from left to right.

This insures that in (30) (R.not) is applied before (R.every). General ordering principles like (O.L.R) are supplemented by special ordering principles for particular lexical items. In the case of (31) the relevant principle is (O.any).

(O.any) (R.any) has priority over (R.not), (R.or) and (R.cond).⁹

This principle ensures that (31) has the expected meaning. The first move in $G(\text{Richard does not date any girl.})$ will yield a sentence like (32).

(32) Richard does not date Susan, if Susan is a girl.

Accordingly, t will only possess a winning strategy for (31) if for every individual either they are not a girl or Richard does not date them. In contrast, since the first move of $G(\text{Richard does not date every girl.})$ is the reversal of roles called for by (R.not), a winning t -strategy

⁹ The rule for conditionals, (R.cond), and the associated notion of a subgame, plays an important role in GTS's treatment of anaphora and the notorious donkey sentences. However, as my aim is not to evaluate GTS as a whole but merely to examine whether it can provide the claimed solution to the problem of proper names, I have not introduced this complication here.

will exist just in case there is one girl whom Richard does not date. In short, the difference between 'any' and 'every' in English is not a difference in the rule associated with them, but a difference in the ordering principles.¹⁰

4.2 Names and GTS

Unlike GTS for first-order logic, which treats the reference of constants as fixed by the model, GTS for natural languages treats the interpretation of proper names as a matter of game play as well. What this interpretation amounts to, however, is merely the assigning of a reference to the name (Hintikka and Kulas 1985, 25). Indeed, it seems that the main purpose of this rule is to deal with the fact that there is generally more than one bearer of any proper name, if the quotation Hintikka and Kulas use to illustrate the phenomena in ordinary discourse is anything to go by.

"Thompson is talking about getting on to Duckett, but I wouldn't have that, not at any price. 'I'll ring Sir John,' I said. Least I could do."

"I presume," said Sir John, with commendable restraint, "that by Thompson you mean Dr. Thompson, and that the Doctor has advised you to get in touch with Sergeant Duckett at the police station in Cregwell Village. Am I right?"

"Of course you're right. It's perfectly simple, isn't it ..."

(Patricia Moyes *Murder Fantastical*, quoted in Hintikka and Kulas 1985, 25).

While Hintikka and Kulas never explicitly state the rule for names, the discussion here and elsewhere in their book suggests that the rule must be something like the following (Hintikka and Kulas 1985, 25, 89, 159):

(R.name) If play reaches a sentence in which a proper name α occurs, T assigns a referent to the name.

¹⁰ Ordering principles are not unique to GTS, but may also be found in games such as chess (where the difference between white and black is merely that white goes first), or tabletop war games.

Hintikka and Kulas do not give a full account of the ordering principles for (R.name), but suggest that it has priority over some specific rules applying to the same clause, while remaining subject to the general structural principles like (O.L.R).

4.3 Modal operators

Before we can fully assess Hintikka's claim that GTS supplies a solution to the problems connected with proper names we must add to our account rules for modal operators. In order to account for these, GTS is generally wedded to possible world semantics, so that at each stage of the game we have both a sentence and a world. This leads to the following rule for 'knows'.

(R.knows that) If play reaches a sentence of the form

b knows that *S*

and the current world is w_1 , *F* selects a world w_2 which is a member of *b*'s epistemic alternatives to w_1 and play continues with respect to *S* and w_2 .

A rule for necessity has not been offered, but we can extrapolate from (R.knows that) to give the following rule:

(R.necessary that) If play reaches a sentence of the form

It is necessary that *S*

and the current world is w_1 , *F* selects a world w_2 such that w_2 is accessible from w_1 and play continues with respect to *S* and w_2 .

With these rules in place we can begin to see what form the GTS treatment of the phenomena of *de re* reference and connected problems will be. For

(11) John knows that Mary enjoyed studying philosophy

there are two rules—(R.knows that) and (R.name)—that could be applied. As the left-to-right ordering principle (O.L.R) applies to both these rules, (R.knows that) will normally be applied first. However, if the choice for 'Mary' is informationally independent of that made for 'knows

that', then the situation will be tantamount to that in which (R.name) is applied first. Thus on its *de re* reading (11) is treated as having the logical form of (26).

(26) $K_{\text{John}} ((\text{Mary} / K_{\text{John}}) \text{ enjoyed studying philosophy})$.

Three questions are raised by this—how is the referent of the name identified, does this give us the correct result, and how does this treatment deal with the modal argument.

4.4 Names and criteria of identification

Hintikka and Sandu's position regarding names, as noted above, is that they are either associated with descriptive criteria (which can't be captured by a definite description) or they are associated with conceptual content composed of both descriptive criteria and continuity-based criteria. In either case, fixing the reference of a proper name in accord with (R.name) will require the player in the role of T to apply these criteria to identify the referent. Presumably then, the idea behind the treatment of (11) discussed above is that applying the criteria before (or in ignorance of) the choice of an epistemic alternative to the world in which evaluation of (11) begins will give different results than applying them after.

(11) John knows that Mary enjoyed studying philosophy

However, it is hard to see how this is compatible with the inexpressibility of the descriptive criteria. Remember, Hintikka and Sandu's view is that quantification in modal contexts presupposes criteria of cross-world identification, and that these criteria are not trivial—that we are not given a prefabricated set of individuals, and that we cannot assume that there is no branching occurring. Definite descriptions, as a kind of quantifier, also depend on the criteria of cross-world identification. Names, though associated with some sort of criteria for application, are not equivalent to any definite description.

4.4.1 Identification and the rule for names

With this in mind, consider the two different games GTS could associate with (11). In a play of the game associated with what (for lack of a better term) we shall call the *de dicto* reading, a world w_2 is first chosen, and then the referent of 'Mary' is identified in that world

by locating the individual matching the associated criteria (whatever they are). In a play of the game associated with the *de re* reading, first (effectively) the referent of 'Mary' is identified. Then a world w_2 is chosen. However, for the identification made first to be of any use, it must be an identification of Mary in every one of John's epistemic alternatives to w_1 . If the identification made only identifies Mary in w_1 then it will have to be made all over again after w_2 is chosen. Therefore if the identification is to be suitably prior to the application of (R.knows that), the referent of Mary must be chosen for each world.¹¹ The question is, on what principles is this choice made. If they are made on the basis of the criteria associated with the name 'Mary', then the choice of the referent in w_2 will be exactly the same as the choice made in the *de dicto* version of the game. In order for there to be a difference, criteria for cross-identification which differ from the criteria which fix the reference of the name must be used in the second case.

In this, the case is perfectly parallel with that of cases with definite descriptions. Consider (1) again.

(1) Stefan knows that Marie Antoinette's lover is French.

In order for there to be a difference between the two readings of (1) we must have a alternative means of re-identifying the person who is Marie Antionette's lover in this world. Presumably, in each case the alternative means of re-identifying the individual concerned are the public principles of cross-identification introduced earlier.¹² If the public principles are an alternative to the criteria for identifying the referent of the name, then of course whatever those criteria are they are not principles of cross-identification.

¹¹ One can see that this is so by considering the game of partial information in which the choice corresponding to (R.name) is made temporally after *but* in ignorance of the choice corresponding to (R.knows that). Since the player in role T will have to choose without knowing what world is at issue, she must make a choice for each world.

¹² Hintikka and Sandu say explicitly that two sets of principles of cross-identification are present in our semantic practice—the public and the perspectival. Since there is no reason to think that perspectival principles are at work, we are left with the public principles.

4.4.2 Names and descriptions

This admission, however, is very important. Recall, Hintikka and Sandu's explanation of the difference in modal profile between (3) and (4) is that the descriptive content associated with the name 'Arthur Prior' cannot be captured by any definite description *because* definite descriptions are quantifiers and thus presuppose the criteria of cross-world identification.

(3) Arthur Prior ϕ ed.

(4) The ϕ ϕ ed.

But this explanation only makes sense if what names pick out is the criteria of cross-world identification themselves. If the set of attributes B such that whatever possesses them is b are, like those mentioned explicitly in a description, separate from criteria of cross-world identification, then the application of the name in alternate possible worlds will itself *depend upon the criteria of cross-world identification*. If this is the case, then there is no reason to think that there will be no definite description which captures the set B .

Of course, Hintikka and Sandu do have an alternative explanation—the difference between (3) and (4) for any ϕ is that the name 'Arthur Prior', unlike the description, does not have any continuity considerations associated with them. The problem with this second approach however is that continuity criteria just seem to be an addition to the set of attributes B . Of course it may be impossible in practice to capture the continuity criteria we use in a description, but is it impossible in principle? The presence of continuity conditions in B are only a barrier to capture by a natural language definite description on a very narrow view of those descriptions. The modal argument, however, is targeted against any description at all, including ones like:

The person who most resembles John.

The ship most continuous with Theseus's.

The thing in world w_2 which has all the attributes in B and meets the usual continuity requirements.

Of course applying the descriptions in this list will be difficult—but presumably no more difficult than applying the usual continuity requirements themselves.

In as far as the combination Hintikka and Sandu's account of names, the GTS treatment of names, and considerations of cross-world identification provide an account of *de re* reference that distinguishes it from *de dicto* reference, it does so in just the same way as any other descriptive account of names. Of course the GTS treatment of independence does give an account of the logical form of the sentences under consideration, but as Hintikka and Sandu themselves note (1995, 261), this is an issue of minor importance. In as far as Hintikka and Sandu are offering a sophisticated version of the description theory they also face the difficulties presented by the modal argument. Of course, the notion of scope allows any description theory to explain the possibility of a difference between (33) and (34).

(33) Necessarily, the number of planets is nine.

(34) Necessarily, the number of planets is the number of planets.

In addition, however, a description theory must explain why it is that there is apparently no reading of proper names on which they are not treated as independent of (or outside the scope of) alethic modal operators. The obvious option for a GTS theorist is to suppose that there is an ordering principle connected with the proper names requiring that (R.name) be applied before (R.necessary that). This is tantamount to adopting wide-scope descriptivism.

4.5 GTS and Soames' revised modal argument

As discussed in chapter two, Scott Soames has recently argued that wide-scope descriptivism does not provide an adequate response to the modal argument. In discussing his argument I noted that it rests on the assumption that a descriptivist must endorse the following thesis (where n is a name, $S(n)$ a sentence containing an occurrence of n , d is a description, and $S(d)$ the result of substituting an occurrence of d for each occurrence of n):

the proposition expressed by $S(n)$ is the proposition expressed by $S(d)$, on an interpretation in which each occurrence of d (that replaces an original occurrence of n in $S(n)$) is given wide scope over every modal operator, modal predicate, and modal quantifier in $S(x)$, except those for which doing this would involve removing d from the scope of some propositional attitude verb (Soames 1998, 5)

This principle is what gives support to (P1) in Soames' revised modal argument:

- (P1) The proposition that if n is F , then something is both F and G = the proposition that if the G is F , then something is both F and G .
- (P2) The proposition that if the G is F , then something is both F and G is a necessary truth.
 $\Box (\text{the } x: Gx) [Fx \rightarrow \exists y (Fy \ \& \ Gy)]$
- (C) The proposition that if n is F , then something is both F and G is a necessary truth.
 $\Box [Fn \rightarrow \exists y (Fy \ \& \ Gy)]$

However the game-theoretical variant of wide-scope descriptivism is not committed to identifying $S(n)$ and $S(d)$, and thus not committed to (P1). To see why, we must consider the rule for 'the'.

The canonical game-theoretic treatment of definite descriptions treats the anaphoric description as the primary one and the referential, Russellian and generic uses as special cases of the general rule (Hintikka and Kulas 1985, 33-76).

- (R.the) If play reaches a sentence of the form
- $$X \text{ — } [_{NP} \text{ the } Y \text{ } ([_S \text{ who}_i \text{ } [_S Z \text{ — } e_i \text{ — } Z']])] \text{ — } W$$
- T selects an individual, say b , from the set I , F selects a different individual, say d , from the set I , and play continues with respect to
- $$X \text{ — } b \text{ — } W, \text{ } b \text{ is a } Y \text{ (and } Z \text{ — } b \text{ — } Z'), \text{ and}$$
- (either) d is not a Y (or its not the case that $Z \text{ — } d \text{ — } Z'$)

In the anaphoric case, the set I is the set of all individuals introduced earlier in the game (by either player). Where no individuals have been previously introduced, contextually relevant individuals are considered. Where the members of that domain are perceptually rather than publicly identified individuals Donnellan-type referential uses will arise. More interestingly, if no individuals have been introduced earlier in the game, and no contextually relevant individuals either fit or appear to fit the description, I is set as equal to the whole domain of discourse. This gives the Russellian reading for definite descriptions as a special case. Finally, generic uses such as (35) arise when I is set to the whole domain of discourse but it is obvious that the speaker does not believe that there is just one thing fitting the description.

(35) The kiwi lives in New Zealand.

In this case, Hintikka and Kulas suggest, the principle of charity guides the hearer into assuming that the utterer intends her utterance to be true of a representative (in this case, species-typical) member of the class.¹³

This rule is distinctly different from (R.name). Accordingly, even if the means of identifying the referent of a name used in an application of that rule are to locate the individual who possesses a set of attributes that could be captured by a definite description, the game associated with a sentence containing that definite description will be different from one associated with the sentence which results from substituting the name for the description. In GTS the game associated with an utterance is the best candidate for the semantic content that utterance. Thus, an advocate of the GTS variety of wide-scope descriptivism is free to reject (P1) of Soames' argument, and need not deny that the argument is valid.¹⁴

4.6 Modal profile revisited

In section 2.4 I raised doubts about whether Hintikka and Sandu's claim that proper names may well have descriptive content without that content being expressible by any definite description was compatible with the GTS treatment of proper names. If that objection is right, then it remains for Hintikka and Sandu to deal with the modal profile version of the modal argument. Why is it that for any non-trivial description ϕ , (3) and (4) seem *prima facie* to come apart in truth value in different possible worlds.

¹³ Interestingly, Hintikka and Kulas suggest that this analysis can also be extended to explain the unusual Scottish use of phrases like "the McDougal" to refer to the head of the clan. In this case, they suggest, the lack of uniformity among members of the clan means that the individual chosen can not be representative in the way the generic use requires. However, there is a distinguished individual—an obvious choice for the individual intended by the utterer—namely the head of the clan.

¹⁴ Soames no doubt assumes that any advocate of wide-scope descriptivism as a thesis about what the reference of a proper name is must, given the desire to explain modal and propositional attitude contexts, take the description to also capture the semantic content of the name. In GTS however there is no clear candidate for the role of proposition as Soames describes it, and the semantic content of any linguistic unit shorter than a sentence is exhausted by the rules and ordering principles associated with it.

(3) Arthur Prior ϕ ed.

(4) The ϕ ϕ ed.

Since the modal profile objection is made in terms of truth-value, not semantic content, it is not enough to point to the fact that $G(\text{Arthur Prior } \phi\text{ed})$ differs from $G(\text{The } \phi \text{ } \phi\text{ed})$. If the description ϕ does indeed capture the set of attributes according to which the referent of Arthur Prior is identified in alternate possible worlds, then the description and the name should be co-referential in each world, and the truth value of the sentences identical.

One response for the advocate of GTS descriptivism is simply to deny that for any non-trivial ϕ there will be some world in which (3) is false. The claim that there is no description for which (3) is necessarily true looks very plausible when what is under consideration are descriptions used in ordinary conversation, such as 'the inventor of tense logic', or 'the foundation professor of philosophy at the University of Canterbury'. However, once we let go of the requirement that the description involved capture the semantic content of the name in addition to pick out its reference in any possible world there are many other descriptions available to us. Indeed, Frank Jackson has recently given a defense of descriptivism as a theory of the *reference* of proper names based on the observation that most objections "overlook obvious candidates to be the descriptions or properties that secure reference according to the theory" (Jackson 1998b, 1).

Of course, for a given name it may well be the case that there is no description ϕ associated with a particular name—with Arthur Prior, for example—but this will be a contingent matter which occurs when we do not have words (other words) for the property or properties associated with the name in question (Jackson 1998b, 6). Nor is this the target of the modal profile argument. The modal profile argument is meant to show that where there are other words for the putative properties associated with a name, the description 'the ϕ ' which captures those properties will always miss the target—there will always be some world in which the name picks out someone other than the ϕ . But of course there are candidate descriptions (clusters of properties) which plausibly do pick out the same thing in each world w as a given name b . One plausible candidate might well be the property of being the thing with a set of properties ϕ which best meets the continuity requirements connecting it to the actual ϕ .

4.7 What GTS can't do

It looks like, as claimed, GTS can give us a plausible account of why it is that a sentence such as (11) can have the force of (12).

(11) John knows that Mary enjoyed studying philosophy.

(12) $\exists x (x = \text{Mary} \ \& \ K_{\text{John}} (x \text{ enjoyed studying philosophy}).$

It does this by treating the *de re* reading of (11) as having the logical form of (26).

(26) $K_{\text{John}} ((\text{Mary} / K_{\text{John}}) \text{ enjoyed studying philosophy}).$

When the rule (R.name) is applied independently of the rule (R.knows that), the result is equivalent to one in which the rule for the name is applied first and thus to (12). By introducing an ordering principle which gives the rule (R.name) priority over the rules for the alethic modal operator (so that names are always independent of such operators) GTS can account for the behaviour of names in modal contexts, and similar treatments are available for counterfactuals.

However, despite this success there remain outstanding problems for the game-theoretic treatment. One problem of course is its reliance on the possible worlds treatment of belief and knowledge, which notoriously has difficulty explaining how it is that one can believe one logical truth while failing to believe another. Of course GTS doesn't treat the proposition expressed by a sentence as a set of possible worlds—indeed, it is not clear that on GTS it makes any sense at all to talk of the proposition associated with a sentence at all, at least if that term is to retain any vestige of its former use. Nor does it treat the set of possible worlds in which a sentence is true as the object of a belief expressed using that sentence. However, since the truth conditions of a belief or knowledge ascription are given in terms of what is true in the doxastic or epistemically accessible worlds (respectively), anything true in all possible worlds will be true in all those alternatives. Put that way, it looks like GTS has a worse problem than traditional possible-worlds treatments. For traditional treatments believing any one necessary truth puts the set of all worlds among my beliefs, and thus if I believe any one such truth I believe them all. For GTS the situation is worse—as long as I believe anything at all I believe all the necessary truths, as they will not be false at any world in my set of doxastic alternatives. Hintikka has indicated that he thinks the right solution for

this problem is to acknowledge that the set of doxastic or epistemic alternatives may include worlds which are not logically possible, and Ranatala (1982) has offered a technical treatment in terms of urn models.

Another serious problem for those interested in the semantics of proper names is (R.name). This rule faces two pressing difficulties as an account of names—first, it treats all names as identical from the point of view of their semantics, and secondly, it allows T to use any name to refer to any object. The first of these might arguably be looked upon as a positive feature of GTS. It has been suggested that proper names are simply not part of language at all, as linguistic competency in no way requires one to master all the proper names, or even a particularly large subset—one might even be considered competent in a language while knowing no proper names whatsoever. However, it does seem that a competent speaker of a natural language would have to know how to use proper names as a class, even if she didn't know any particular proper names. (R.name) it might be argued, captures this peculiar feature of names by treating them as semantically on a par—if you know how to use one then from the point of view of the semantics you know how to use them all.

However, this feature of (R.name) looks a lot less desirable in light of the fact that as stated it allows the player in role T to choose any referent at all for a given name. Of course, given a sentence like (36) there are lots of candidates for the referent of 'Nicole'.

(36) Nicole is related to John Ralston Saul .

However, not just anybody is a candidate—in order for someone to be the referent of the name there must be a convention, however localized, of using that name to refer to them. We would not take kindly to someone who, upon challenged over the truth of (36), defended his claim by saying that 'Nicole' refers to Adrienne Clarkson.¹⁵ As written however, (R.name) will provide a winning strategy for (36) to *t* as long as Adrienne Clarkson is chosen as the referent of 'Nicole'. In fact, for any simple sentence involving a name and a simple predicate (R.name) provides a winning strategy just in case the predicate is satisfied—*t* must merely chose whatever satisfies the predicate as the reference of the name.

¹⁵ Of course we can enter into extremely localized agreements to use a name. You and I may agree to use the name 'Nicole' to pick out Adrienne Clarkson throughout the course of an evening so as the discuss Canada's Governor General without anyone else realizing it. Given such a convention your utterance of (36) will be true. However, the convention must precede the use (though of course it need not be explicitly stated).

Of course the version of (R.name) presented here is my reconstruction based upon some rather sketchy remarks by Hintikka and Kulas (1985). Advocates of GTS may well be able to offer a rule which does put appropriate constraints on which object can be chosen as the referent of the name. However, it does seem to me that we can make some predictions about any proposed rule. First, any such rule will almost certainly be the result of encoding some other theory of names in game-theoretic form. One can easily imagine causal game-theoretic accounts, metalinguistic game-theoretic accounts, etc. The most likely candidate, given Hintikka and Sandu's expressed views about the descriptive content of names, is a descriptive game-theoretic account. Secondly, there seems to be no in principle reason to think that any such account will not run into the same problems as its non-game-theoretic analogue. In the case of the descriptive version of (R.name) the considerations of scope and cross-world identification discussed in section 1 only work for it if they work for any other descriptive theory. GTS may provide an explanation of how a proper name can be independent of a logical operator, but this will not be of any help if Kripke is right about cross-world identification. Sometimes independence doesn't matter.¹⁶

In short, if advocates of GTS can find the right theory of proper names it will likely be a theory everyone can use, and if someone else gets the right theory it almost certainly can be incorporated into GTS.

5. *So, is the NTR based on a fallacy?*

Neither game-theoretic semantics nor the general considerations of cross-world identification seem to provide a viable positive account of names. The key negative claim made by Hintikka and Sandu is that the new theory of reference, and with it the naïve view of proper names, rests on a serious of errors and fallacious arguments. In general, however, I think it is Hintikka and Sandu who have missed the point of the advocate of direct reference. I shall take each of their main charges in turn.

¹⁶ See section 3.2.2

5.1 *De re* reference

- Arguments based on ascriptions of *de re* modality (whether alethic or epistemic), do not provide evidence of the existence of directly referential terms. Ascriptions of *de re* modality are adequately explicated by quantifiers and scope.

The modal argument against the description theory of names is primarily meant to show that a descriptive sense does not fix the reference of proper names in alternative possible worlds—that is, that the reference of the name in a world α is not whatever individual in α matches a non-rigid description associated with the name. The problem is not the existence of *de re* reference in epistemic or other contexts, but the fact that for alethic modal operators the *de dicto* use does not seem to be possible. Kripke's modal argument is intended to show that names are rigid designators, not that they are directly referential. The treatment of names as having descriptive content but taking wide scope is one way to deal with this, direct reference another. This form of the modal argument is targeted against simple descriptivism, but not against wide-scope or rigid descriptivism.

5.2 Criteria for cross-identification

- An account of quantification in modal contexts requires independent criteria for comparing the denizens of different possible worlds—i.e. criteria for cross-identification. On pain of circularity these criteria cannot make use of quantifiers, and thus cannot exploit definite descriptions. However, the mistake made is to assume that these criteria of cross-identification in any way implicate the existence of a class of rigidly designating free singular terms in natural language. That is, it is sufficient for making sense of quantification that we have such criteria. The variables associated with quantifiers will be directly referential. It is only on a substitutional interpretation of the quantifiers that direct reference by variable depends on a class of directly referential singular terms.

Hintikka and Sandu may be right about the connection between the invention of the new theory of reference and the early advocates interest in quantified modal logic. However, the primary reasons in favour of treating names as directly referential rigid designators do not depend on quantification into modal contexts. Most advocates of direct reference do not deny

that there could be descriptive names in natural languages, and many allow that there are probably a small number of such names, e.g., Jack the Ripper. Rather, the claim is that the use of the majority of proper names is best accounted for by the supposition that proper names are in general directly referential. Advocates of the NTR are in no way committed to the view that there must be a class of directly referential terms in natural languages.

5.3 Rigid reference versus rigid designators

- The fact that we *can* refer to an individual in all the possible worlds—i.e. rigidly—does not by itself give us any reason to think that there is in natural language a class of singular terms which refer rigidly in virtue of the semantic properties of the class, or even any terms which, as a matter of their linguistic meaning, refer rigidly.

Hintikka and Sandu are certainly right in this respect. The mere fact of rigid reference does not by itself support the existence of such a class of terms. After all, the indexical 'actual' gives a mechanism by which we can form rigid designators out of otherwise flaccid descriptions, and Kaplan's *dthat* provides a technical device with a similar effect. However, as noted above, the NTR is not committed to any essentialist claims about the existence of such terms. The claim is rather that, as a contingent linguistic fact, we use proper names as rigid designators, and that the best explanation of this is that they are directly referential.

5.4 The metaphysics of individuals

- The metaphysical assumption that individuals are prefabricated is unfounded. The non-branching view of lines of cross-world identification rests on an unacceptable and implausible metaphysics of individuals.

Suppose that Hintikka is right and that individuals (at least the kind that can exist in multiple possible worlds) are post-fabricated relative to our interests, and also that the individuals in question can branch in alternate possible worlds. The question will then be what the relationship between names and these individuals. Consider a simplified example in which we determine that the planet named Hesperus should be identified as planet X in world α , while Phosphorus should be identified as planet Y, despite the fact that in the actual world Hesperus and Phosphorus are co-instantiated.

One might ask why we should continue to say that the terms 'Hesperus' and 'Phosphorus' are co-referential. Whatever the method by which the referent of a proper name is fixed, it seems that in this case the method has produced different answers. However, Hintikka and Sandu are entitled to point out that they are co-referential in the same sense that 'the number of planets' and 'nine' are co-referential. That is, identity claims between them are true, and they support substitution *salva veritate* to the same degree.

Putting aside the question about pre and post-fabrication of individuals and the stipulation of possible worlds, Kripke's claim is that, where the proper names a and b both pick out an individual i in the actual world, whenever we have reason to identify a given individual d in a world α as the referent of a , we have equally good reason to identify d as the referent of b . The mere fact that in an alternate possible world there are two entities with good claims to be i is not sufficient to show that the names differ in referent in that possible world. If the referent of a name is in general fixed by non-rigid descriptive criteria, then the names may diverge in reference in α . If however the reference is fixed by rigid criteria—whether descriptive, causal, or something else—then both names will refer to the same thing in α , or if there is no suitable candidate, neither will refer.

In short, the question comes down to one about our actual use, rather than one about the status of individuals across possible worlds. The data here is our intuitions about alethic modal claims and the modal profile of various sentences, and as noted above, this suggests that names are rigid designators.

5.5 Direct reference and the necessity of identity

- Direct reference does not imply the necessity of identities between directly referential terms unless supplemented by the assumption that the world lines do not split or merge. Branching need not violate the continuity considerations that seem so important to cross-identification and re-identification.

Hintikka and Sandu's claim that even if names are directly referential (and thus rigid designators) branching allows for contingent identities between them is very puzzling. Directly referential terms have no meaning other than their referent. So in a case like that discussed above, where the terms 'Hesperus' and 'Phosphorus' pick out different planets in an alternate possible world, the assumption that they are directly referential seems to commit us

to the claim that they have different referents in the actual world—i.e., that 'Hesperus' refers directly to one individual, and 'Phosphorus' to another, but that these "individuals" are co-instantiated in the actual world. If we don't assume this, then there seems to be no reason to think that they pick out different planets.

The situation is different in the case of descriptions. It is easy to see how the description 'the planet seen first in the evening' and the 'planet seen first in the morning' could have the same reference in one world and a different one in an alternate world. Their referent in each world is determined by the linguistic meaning of the description. But the linguistic meaning of directly referential terms is exhausted by their referents. There seem to be two possibilities. Suppose the content of 'Hesperus' and 'Phosphorus' is the object in the actual world. If this is the case, then in an alternate possible world they will pick out whatever has the best claim to being the object in that possible world. If there are two or more objects with good claims, then whatever object has the best claim (perhaps, if Hintikka and Sandu are right, the best claim relative to our interests) will be the referent of both names. Alternatively, the content of 'Hesperus' is one cross-world line of identification and the content of 'Phosphorus' is a different cross-world line of identification. In this case, there seems to be no reason to say they have the same referent. Unlike the descriptions, or descriptive names, we cannot say they have different linguistic meaning but the same referent, as their linguistic meaning just is the referent. So in this case it seems like the names really aren't co-referential after all, and thus the identity claim between them is not literally true. This solution, like those which identify the referent of names with different time-slices of a normal individual, is of no help at all. First of all, this view must deny that it is possible for two names to pick out the same cross-world line of identification, or the problems with names will arise all over again. Secondly, it is well known that the problematic opaque cases can arise even when there is just one name (see some earlier chapter), and this phenomena can not be accounted for by the different referents view.

Hintikka and Sandu put a lot of emphasis on the fact that the lines of cross-world identification are relative to our interests. This might suggest that we can constantly re-draw the lines, so that the situation we described for first possibility, where the content of the co-referential names is the object in the actual world and not the cross-world lines of identification is not accurate. One might propose that while the names pick out the object and are directly referential, our interests cause us to draw the line one way with respect to the use of 'Hesperus' and another with respect to the use of 'Phosphorus'. Now as a matter of fact this does not seem to be Hintikka and Sandu's view—they suggest that there are two criteria of

cross-world identification in use, a set of public criteria defining public objects, and a set of perspectival criteria associated with the space of our perceptual fields that defines visual, auditory, and other perspectival objects. This second set of criteria is closely associated with indexicals like 'I' and 'that'. There is no reason to associate the use of 'Hesperus' or 'Phosphorus' with perspectival criteria, and so the public criteria must be at work for both of them.

As will become clear in what follows, I have some sympathy with the view that our interests affect our use of proper names. However, I do not think the view that the effect of our interests is to cause us to draw the lines of cross-world identification differently with respect to two different names can make sense of the claim of contingent identities between directly referential terms. The suggestion that the mere use of the term 'Hesperus' rather than 'Phosphorus' can change our interests with respect to drawing the lines of cross-world identification does not sit well with the claim that the meaning of the terms is exhausted by their reference. If the mere difference of terms is enough, then there must be some difference in the linguistic meaning of the terms. And notice if this claim is to support the view that identity statements like (37) are contingent, it must be merely the difference of terms that does the job, since there is no other context (such as a propositional attitude) to trigger this change.

(37) Hesperus is Phosphorus.

5.6 Puzzling Pierre

- The solution to the problems connected to the propositional attitude contexts is to acknowledge that in someone's doxastic alternatives names which are actually co-referential may well diverge in reference. In Kripke's case of puzzling Pierre this means that London and Londres may diverge. This solution does not depend on attributing descriptive content to the names—they may refer to two objects in worlds in which there are two identical counterparts to the object which is the actual world referent. Alternatively, we might say that the believer—say Pierre—does not know what city London (and/or Londres) is, since in some of his doxastic alternatives 'London' picks out a different city.

Hintikka and Sandu's first non-descriptivist solution to the problematic propositional attitude cases stands or falls with the notion that two proper names can be genuinely co-

referential and refer directly and yet have their reference diverge in alternate worlds, a notion which I take the above discussion to have shown to be incoherent. The second solution seems to suffer from a different difficulty. Pierre lives in London and based on his experiences denies that 'London is pretty' is true, but, ignorant of the fact that London is Londres, believes that Londres est jolie on the basis of tourist information he read before leaving Paris (Kripke 1979). The proposal is that we explain this by saying that it is compatible with what Pierre knows that 'London' picks out a number of different cities. But if this is the case, then it is unclear why we would say that Pierre has any beliefs about London at all.¹⁷ Instead, they seem to be suggesting that his mental attitude is best captured by the claim that he believes that the sentence 'London is not pretty' expresses a truth. This is just the metalinguistic view of belief, which faces many known problems. Alternatively, they might be suggesting that his belief has the content 'the city called London is not pretty', i.e., advocating a metalinguistic descriptive view of names. Either way, the proposed solutions are neither straightforward or easily implemented.

6. Conclusion

In discussing Hintikka and Sandu's criticisms of the new theory of reference I have restricted my attention to the claims made about the arguments in favour of treating names as directly referential. It may well be the case that they are right to emphasize the interest relative nature of cross-world identification and that Kripke is mistaken in his claim that it is not a genuine problem. Never-the-less, the possibility of branching lines of identification and multiple criteria for cross-world identification does not show that proper names are not directly referential. Hintikka and Sandu seem to have mistaken the claim that proper names are as a matter of fact directly referential for some sort of essentialist claim that there must be a class of directly referential terms. The argument that names are directly referential is based on our actual use of those names, and our intuitions about the truth values and meaning of the sentences in which they occur. Finally, Hintikka and Sandu have not offered a viable alternative view. Game-theoretic semantics has the potential to provide an explanation of *de re* reference in terms of the independence of names from modal operators. However, it cannot provide a full explanation of the behaviour of names or insure that the independence of names in particular contexts results in the correct result without providing an adequate rule for

¹⁷ I owe this observation to Jack Copeland.

names. In order for the rule for names to do the job it will have to capture an account of proper names which would do the job for game-theoretic semanticists and others alike.

Hintikka and Sandu's positive account seems to come down to the view that proper names express some kind of descriptive content which is always given wide-scope over modal operators, but which can take either narrow or wide scope with respect to propositional attitude verbs. Descriptivism in general faces two problems—the objections raised by Soames' modal argument and the fact that it (like its neo-Fregean relative) cannot account for either Lydia cases or the opaque simple sentences discussed by Saul and Bezuidenhout. While game-theoretic semantics provides an answer for the former problem, it is still faced with the latter.¹⁸

¹⁸ GTS definitely cannot afford to ignore the Saul examples, since as a program in linguistics it is committed to treating ordinary language use in its full diversity. For an example of GTS's commitment to treating even marginal phenomena of ordinary use see the discussion of the highland use of phrases like 'the McDougal' in footnote 13.

CHAPTER FIVE

Neo-medieval semantics

Hintikka and Sandu are not the only philosophers to have defended the idea that the puzzles connected with singular terms stem arise because of inadequacies in our underlying logic. Gyula Klima finds the root of the difficulty in the Fregean approach to quantification itself. What ever the virtues of a Fregean treatment for mathematics, Klima suggests, the right account of natural language quantification is to be found in a formal system designed expressly for it, namely, medieval logic. In his view the problems connected with opaque contexts are just one symptom of the general failure of the contemporary approach to quantification in natural languages.

Klima divides the anomalies of the Fregean quantificational paradigm into four broad categories (Klima 1990). First are the unrepresentable sentences. Natural language contains a broad variety of quantifiers, including 'most' and relatives like 'more than half of' that simply cannot be captured by first-order quantification theory.¹ Those who think that branching quantifiers are part of natural language quantification will also include these sentences in this class. Second are the anomalies associated with cross-reference and anaphoric pronouns. It is well known that standard quantification theory has difficulty capturing the notorious donkey sentences like (1).

(1) If Bill owns a donkey, he beats it.

Third we have the various opaque contexts, including the problematic propositional attitude contexts.² Klima's fourth category is the mismatch between the syntax of first-order logic and

¹ No formula of first-order logic can give their truth conditions. See Barwise and Cooper 1981.

² Klima considers only the possible worlds based treatments which deal well with modal contexts but do not offer sufficiently fine-grained intensions to handle the attitudes. However, while the return to the Russellian

natural language, but this mismatch would be (as he notes) of little concern (except as a research program in linguistics) if it were not for the other inadequacies.

The result of these difficulties has been what Klima describes as a splitting up of the paradigm. Just as the difficulties caused by names have resulted in a proliferation of competing theories, none of which has a decisive advantage over the others, the other problems raised by natural language have resulted in a variety of competing approaches, including Montague semantics, discourse semantics, adaptations of possible worlds semantics including that of Cresswell and the situation semantics of Barwise and Perry, and game-theoretical semantics. And, just as in the case of names, no one theory is dominant. Klima's proposal is that a unifying perspective, and indeed a new paradigm for quantification theory, is to be found in late medieval logic—in particular in Jean Buridan's versions of the medieval theories of signification (roughly analogous to linguistic meaning) and supposition (roughly analogous to reference). The larger question—whether a medieval inspired approach to quantification can ameliorate the difficulties posed by quantification in natural language—is not one I will directly discuss here. However, I will argue that the problems connected with proper names are not solved by late medieval semantic theory. If I am right about this then the answer to the more general question can at best be that a medieval style semantics helps with some of the problems, rather than providing the new paradigm that Klima hopes it can.

1. *Signification and supposition*

Of course it is a misnomer to speak of *the* medieval theories of signification and supposition—instead we have a number of competing theories held together by a common terminology and a common goal. Klima's main interest is in the fourteenth century approach to semantics exemplified by the views of Jean Buridan and William Ockham, and it is on their views that I will concentrate.

1.1 Signification

The first ingredient in medieval semantics is the theory of *signification*. Signification is the relation which holds between the smallest significant elements of a language and the

notion of the structured proposition offers a considerable improvement, we have seen that names continue to offer a difficulty.

elements of the world they are signs for. However, the theory differs from contemporary accounts of linguistic meaning in that signification is a causal property of terms (Spade 1982, 188). A word signifies whatever it brings to mind or makes understood.³ Most medievals took written and spoken terms to have their signification in virtue of their relationship to mental terms, and mental terms were seen as the primary bearers of signification. Written terms were often claimed to signify their ultimate significates in virtue of immediately signifying vocal terms, which in turn immediately signify mental terms. It is only the mental terms, or concepts, corresponding to 'man', 'animal' and 'whiteness' which immediately signify men, animals, and white things. However, it is the ultimate significates of terms which medieval semantics is primarily concerned with.

Medievals distinguished between the syncategorematic terms and the categorematic terms—a distinction which roughly corresponds with the modern division between the logical operators and the non-logical parts of language. The syncategorematic terms are often characterized as not signifying anything, though of course they are not meaningless in the broader sense. Thus Ockham writes:

Examples of syncategorematic terms are 'every', 'no', 'some', 'all', 'except', 'so much', and 'insofar as'. None of these expressions has a definite and determinate signification, nor does any of them signify anything distinct from what is signified by categorematic terms. The number system provides a parallel here. 'Zero' taken by itself does not signify anything, but when combined with some other numeral it makes that numeral signify something new. Likewise, a syncategorematic term does not, properly speaking, signify anything; however, when it is combined with a categorematic expression it makes that categorematic expression signify or supposit for something in a determinate manner, or it performs some other function with respect to the relevant categorematic term (Ockham *Summa logicae* I, c.4).⁴

³ See, for example, Ockham, *Summa Logicae* I c.1

⁴ Henceforth SL. Translations of Part one of the *Summa logicae* are Micheal Loux's, from Ockham 1974a. Loux uses the quotation mark device to create names for 'every', 'no', etc. In light of the topic under discussion it is worth pointing out that this device is not used (or needed) by the medievals. As we shall see, their view is that one of the ways in which a term can supposit is for itself, the class of tokens equiform to it, or one of a variety of other objects other than what it signifies.

We may thus contrast 'man', 'animal' and 'whiteness', which bring to mind (respectively) all men (and nothing else), all animals, and all whitenesses, with 'every', which does not bring anything to mind at all. However there were a number of competing theories of syncategorematic terms—Abelard thought that they generated an understanding without generating an understanding *of something* (Abelard 1970, 119 3-16), and Buridan that they signified ways of conceiving things (Buridan 1977, 4: 1966, 116).⁵ This latter position of Buridan's plays a key role in his account of the sophism 'I owe you a horse', discussed below in section 3.5.

1.2 Supposition

The aspect of medieval semantics that we will be most concerned with is supposition theory. Supposition is a relation between terms and things just as signification is. However, while the role of signification is to make the basic assignments that create a language, supposition, as Peter King suggests, is what explains our use of language to actually talk about things:

It is one matter to assign certain terms to certain things, so that a language may be set up in the first place; this is the contribution of signification. It is quite another matter to actually use that language to talk about things; this is explained by supposition, which accounts for the referential use of (significative) terms. Hence there are two major differences between supposition and signification: first, terms have signification wherever they are found, inside or outside a sentence, but it is only in a sentence that we use terms referentially, that is, actually talk about things and say something about them (King 1985, 35).

Supposition theory provides the answers to two questions—what kinds of supposition can a term have, and in what contexts does it have each kind.

The word 'supposition' would be accurately translated as 'reference', but the medieval approach to the reference of terms is different from ours in two important ways. First of all, terms only have supposition in a sentential context. Words do not have any supposition until used in an utterance. Secondly, all supposition is context sensitive—what a term supposits for

⁵ See Spade 1982, 190-191 for a list of various accounts of the syncategorematic words.

always depends on the utterance in which it appears and the context of that utterance. Occurrences of a term were classified according to the kind of supposition the term had. The basic division is that between proper and improper supposition. A term has proper supposition when it is being used literally, improper supposition when it is being used rhetorically or figuratively. Proper supposition is then divided into material, simple, or personal.

1.2.1 Material and simple supposition

A term has *material supposition* when it stands for itself, another token equiform to it, or a token(s) of one of the other levels of language. In (1)-(3), for example, the term 'man' has material supposition.

(2) Man is a noun. (homo est nomen)

(3) Man is a spoken monosyllable. (homo est vox disyllabus)

(4) Man is a written expression. (homo est dictio scripta)

(2) and (3) are about spoken expressions and (2) and (4) about written expressions. None of them are about particular human beings, or human nature.

Obviously material supposition is in part concerned with the use/mention distinction familiar to contemporary philosophers. However it is not quite correct to assimilate it this distinction. First of all, the quotation device transforms a word into a name of itself, whereas for the medievals a term is the same whether in material, personal, or simple supposition. Secondly, the quotation device can be iterated, whereas material supposition cannot. Finally, and most importantly, a term can materially supposit for terms that are only similar to it. A term in one case or gender can materially supposit for one in another, and a clause in indirect discourse supposits for one in direct discourse (King 1985, 40; McCord Adams 1987, I 330). Thus, material supposition covers more cases than the use/mention distinction.

Simple supposition is exemplified by the use of 'man' in (5).

(5) Man is a species. (homo est species)

Here however there is less agreement among medieval authors about what the term 'man' supposits for. Those realists who took species to be mind-independent universals said that a common term in simple supposition stands for the universal associated with it. In contrast

Ockham, who takes universals to be nothing but concepts, claims that a term with simple supposition stands for the concept associated with it (Ockham *Summa logicae* I, c.64). This nominalist program in semantics culminates with Buridan, who takes the logical step of equating simple supposition with material supposition. Since a concept is nothing other than a mental term, he sees it as just as much a sign as an utterance or inscription. Supposition for a concept is thus just another class of material supposition (Buridan *Tractatus de suppositionibus*, 3.2.6)⁶.

1.2.2 Personal supposition

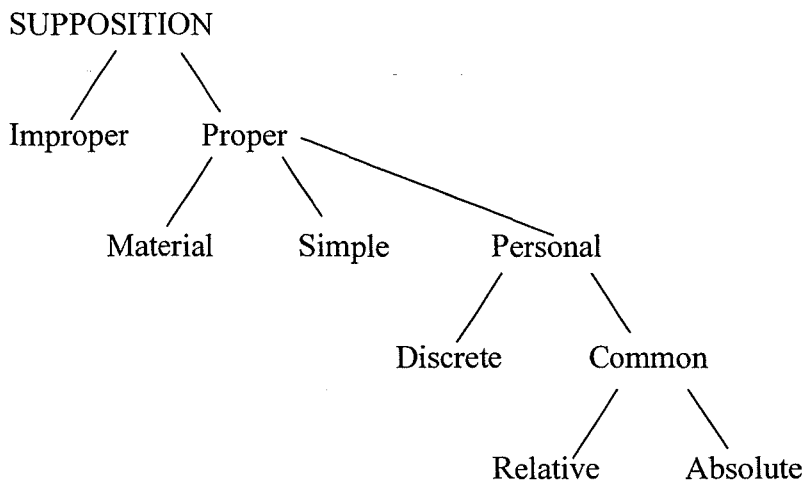
Finally, a term has *personal supposition* when it supposits for the thing(s) it (ultimately) signifies. Thus 'man' in (6) was judged to have personal supposition.

(6) Man is white. (homo est albus)

Individual men are what are being attributed a colour, and thus what 'man' stands for. Personal supposition is further divided into *discrete* and *common* supposition. Singular terms, whether proper names or demonstrative pronouns like 'this man', have discrete supposition. Common terms in personal supposition, such as 'man' in 'A man runs' or 'Every man is an animal' have common supposition. Buridan, who offers a particularly complete categorization, further divides the common supposition into *relative* and *absolute*, where relative supposition is that possessed by anaphoric terms (Buridan TS 3.3.1).

The relationships between the various kinds of supposition can be represented by the following figure:

⁶ Henceforth TS. See Buridan 1985.



While these kinds of supposition are the most common, they do not exhaust the kinds discussed. Buridan, for example, gives considerable attention to the scientific use of a terms to stand for everything it signifies in the past, present, or future (*natural supposition*) and some earlier philosophers extensively considered the divisions of improper supposition.

1.3 The modes of common personal supposition

The further division of absolute common personal supposition into the notorious modes of supposition has caused considerable disagreement among modern commentators. The account of the different modes has often been seen as an account of quantification. Marilyn McCord Adams describes the whole of supposition theory as best corresponding to a theory of satisfaction (McCord Adams 1987, I 327), and suggests that it is closely tied to fallacy recognition, claiming that on this account "the two parts of Supposition Theory are not disjointed the way a use/mention distinction and a theory of quantification are, but are united under the rubric 'aspects of the way words stand in propositions for things, useful in fallacy detection'" (McCord Adams 1987, I 382). In contrast Peter King thinks that it is without question a theory of reference (King 1985, 35) and Paul Vincent Spade thinks that it is a theory of reference but that by the fourteenth century the divisions of common personal supposition are vestigial (Spade 1988). However the most convincing account is that of Terence Parsons, who like Spade sees the early versions of the theory as an unsuccessful attempt to connect the theory of reference with the theory of quantification, but maintains that by the fourteenth century the modes of common personal supposition had become part of a theory of global quantificational effect (Parsons 1997a).

1.3.1 The modes

Common personal supposition divided into *determinate* and *confused supposition*, and confused supposition into *merely confused supposition* and *distributive confused supposition*. Determinate supposition is exemplified by both subject and predicate terms of existentially quantified statements such as 'A man runs' or 'Some man is white'. Ockham describes determinate supposition as when:

the assertion is that a proposition of the relevant sort is true in the case of some determinate particular. That particular by itself is sufficient to make the proposition true. Nothing else is required. Thus, for the truth of 'A man runs', it is required that one of the relevant singular propositions be true. Any one will do, and it makes no difference whether the remaining singular propositions are all false (Ockham SL I, c.70).

The singulars in question are sentences in which the term with common supposition is replaced by a term which supposits discretely for one of the things the term supposits for. Thus, both 'Socrates runs' and 'This man runs' are relevant singulars for 'A man runs'.

The remaining cases of common supposition are all classed as confused. The subject terms of universally quantified sentences such as 'Every man runs' exemplify distributive confused supposition. A term has distributive confused supposition when the truth of the proposition requires that all of the relevant singulars are true (Buridan TS 3.6.1; 3.6.3: Ockham SL c.70). Finally, a term has merely confused supposition when none of the singulars are required to be true for the proposition to be true. For example, 'Every man is an animal' can be true without it being the case that "Every man is this animal" is true.

1.3.2 Global quantificational effect

One of the familiar parts of contemporary quantification theory is the notion of prenex normal form. Provided there are no biconditionals in a formula of first order logic it is possible convert that formula into an equivalent one in which all the quantifiers are at the front and each of them has scope over everything to the right of it. This is accomplished by moving the quantifier in stages towards the front of the formula. The movement is subject to two restrictions—(a) whenever you move the quantifier past a negation or a conditional it

must be switched from existential to universal or vice versa, and (b) you cannot move an existential past a universal or vice versa. Thus we can transform (7a) into (7e) via the following steps.

$$(7a) \neg (\forall y Gy \rightarrow \forall x Px)$$

$$(7b) \neg \exists y (Gy \rightarrow \forall x Px)$$

$$(7c) \forall y \neg (Gy \rightarrow \forall x Px)$$

$$(7d) \forall y \neg \forall x (Gy \rightarrow Px)$$

$$(7e) \forall y \exists x \neg (Gy \rightarrow Px)$$

Thus the second universal quantifier in (7a) (i.e., $\forall x$) is in effect an existential quantifier which takes narrow scope with respect to $\forall y$. It is on this basis that Parsons defines what he calls the *global quantificational effect* of a quantifier. Each quantifier when moved up front will be either a universal or an existential quantifier and in addition may be able to move to the front of all the other quantifiers in the formula (Parsons 1997b, 10). Thus the global quantificational effect of a quantifier is composed of the kind of quantifier it becomes in the sentences prenex normal forms and the scope that it has in those forms.

On this basis Parsons is able to give the following alternate definitions of the modes of common personal supposition.

A term is *determinate* in a formula if it becomes a wide scope existentially quantified term in (one of) the prenex normal form(s) of that formula.

A term is *distributive* in a formula if it becomes a universally quantified term in (one of) the prenex normal form(s) of that formula.

A term is *merely confused* in a formula if it becomes an existentially quantified term in (one of) the prenex normal form(s) of that formula, but can't get wide scope in any such form (Parsons 1997b, 10).

The equation of the modes of common personal supposition with global quantificational effect is complicated by medieval use of restricted quantification. When the quantifiers are restricted it is no longer the case that every quantifier can be moved into

prenex position. One advantage of treating the doctrine of the modes of supposition as an account of global quantificational effect is that for restricted quantifiers the gaps match up—that is, the very quantifiers that have no prenex position are those that medieval authors could assign no mode of supposition to (Parsons 1997b).

2. *Ampliation and Appellation*

Medieval philosophers gave truth conditions for sentences terms of the form of a sentence and the supposition of its terms. The general requirement for the truth of a categorical proposition—namely one which doesn't contain any sentential operators or connectives—is that the terms of the sentence supposit for the same thing. Complications arise when the sentence contains syncategorematic terms. Ockham gives a fairly exhaustive set of truth conditions, noting, for example, that an existential sentence is true just in case there are some things that both terms supposit for, and that a universal is true just in case the predicate supposits for all the things that the subject supposits for. (Ockham SL II, c2-10).⁷ Complications arise for more complicated sentences, especially tensed sentences and those containing modal operators. It is these complications that give rise to the doctrines of ampliation and appellation.

2.1 Ampliation

The default supposition of a term is for all of its significates that exist in the present time. For example in (8) the term 'man' supposits for all those men which currently exist.

(8) A man is running.

However when the sentence in which a term occurs is tensed, or includes a modal operator or any related term, the term is amplified to stand for significates that don't currently exist. Accordingly, in (9) the term 'man' stands for past men as well as present ones.

(9) A man was running.

⁷ See Ockham 1980.

In general a term occurring before a tensed verb is amplified to supposit for those of its significates that exist both presently and at the time of the verb (Buridan TS 6.2.1). One occurring after a tensed verb is amplified to supposit for those of its significates which exist at the time of the verb (Buridan TC 1.6.2). Similarly, a term occurring in a sentence with a modal operator will be amplified to stand for merely possible things (Buridan TS 6.2.1).

2.2 Appellation

Before turning to Buridan's treatment of intentional contexts we need one more element of medieval semantic theory—the theory of connotation or as Buridan calls it appellation. Consider this example from the *Sophismata* (Buridan 1977; 1966).

Third sophism: White will be black.

I posit the case that this wood is now white, and tomorrow it will be black. Then it is argued as follows: this wood will be black and this wood is white; therefore white will be black.

The opposite is argued. A proposition of the future is not true if the corresponding proposition of the present will never be true. For example, if this true: "Antichrist will preach," it follows that at some time this will be true: "Antichrist is preaching." Similarly, the proposition "Aristotle argued" is not true unless at some time it was true to say that Aristotle is arguing. And so of others. But it has never been true to say that white is black, nor will it ever be true to say this. Therefore it is the case that neither white is black nor that white was black (Buridan 1966, 111; 1977, 60).⁸

2.2.1 Primary and secondary signification

In order to understand utterances like (10) we must, in Buridan's view, pay careful attention to the relationship between the primary significates of an appellative term and its secondary significates.

⁸ Translations of the *Sophismata* are all adapted from those of T. K. Scott, which appear in Buridan 1966.

(10) White will be black.⁹

Both 'white' and 'black' are appellative rather than absolute terms. Appellative terms are ones which supposit for one thing or group of things but connote a second thing or group of things in an indirect way. In contrast, an absolute term has no connotation or connotes only those things for which it supposits. Appellative terms have both a primary and a secondary significates. Buridan, like Ockham, has a peculiarly nominalist theory of appellation. Consider, for example, sentence (11).

(11) Socrates is white.

According to both nominalist and realist, both subject and predicate terms supposit for the same thing—namely Socrates. On the realist account Socrates, qua white thing, is one of the *secondary significates* of the term 'white' (*album*), which primarily signifies the universal) That is, the primary significates of connotative terms are universals, whereas the secondary significates are the things which fall under them. For Ockham, and later Buridan, the situation is partially reversed, and of course the mind independent universal done away with. The primary significates of 'white', for Buridan, are the white things, that is, those particulars for which it can have personal supposition. The secondary significate is not however, the universal, as one might expect. For a nominalist like Buridan the universal is nothing other than the concept of whiteness, and a strict reversal of the previous doctrine would make this concept the secondary significate of the term white. However Buridan does not take this position but instead maintains that the secondary significates of 'white' are the particular whitenesses that inhere in the white things—that is, the reasons for which these things are truly called white. The whitenesses in question are not universals but particulars. In (8) the term 'white' supposits for Socrates (along with all the other white things) because there is a particular whiteness inhering in him. A term connotes or appellates its secondary significate because it is the secondary significate which determines the primary significates of the terms.

Buridan refines this view by noting that while some appellative words supposit for those things in which the secondary significates actually exist relative to the time of the

⁹ An indefinite sentence in which the subject term has personal supposition is equivalent to an existentially quantified sentence—i.e., (10) is equivalent to 'Some white [thing] will be black', not 'Every white [thing] will be black'.

proposition, others are what he calls privative terms, in that they supposit for those things in which lack the secondary significates at the time of the proposition. For example while both 'caecum' (blind) and 'videns' (sighted) appellate vision, 'caecum' appellates vision as non-adjacent, so that it can only supposit for those things which do not have vision.

2.2.2 Secondary significates and appellation

The difficulty with (10) arises because of the role of the secondary significates in fixing the primary significates (and thus the supposition) of the appellative terms. Since blackness and whiteness cannot simultaneously inhere in the same substance, it can never be the case that 'black' and 'white' can simultaneously supposit for the same thing. Thus (10') can never be true.

(10') White is black.

Accordingly (10) cannot be read as (10a) and consistently treated as true (where t is the present time).

(10a) There is a time $t' > t$ such that at t' it is true that white is black.

Buridan's solution is to note that combining an appellative term with a tensed verb affects the appellation and thus the supposition of that term. He writes:

appellative terms appellate differently in respect of a verb of inherence and of the present tense and in respect of a verb of the past or future tense, and in respect of this verb 'can' or 'possible'. For in respect of a verb of the present tense (if there is not an ampliative term), a appellative term, whether it is the subject or predicate, appellates its thing as something related in the present to that for which the term is of a nature to supposit, and as related to it in some determinate way, according to which it appellates it. And then to whatever things such a appellated thing belongs, that term supposits for those things and no others. And such a term, suppositing for some things, not only would cease to have supposition because of the destruction or annihilation of those things, but because of the removal of the appellated things or of the manner in which they are related to those things. For example, if the term 'shod' supposits for you, it

would cease to supposit for you if your shoes were removed from you. But in respect of other verbs the subject and predicate appellate differently. For the predicate appellates things only for the time covered by the verb—for whatever time the verb has been restricted to. And if for this time, the mode of relation of the thing appellated does correspond to that for which the time is of a nature supposit, then it does not supposit for that thing, regardless of how well the mode of the relation corresponds for the [whole] time of the verb. For example, if I say 'Socrates was white yesterday,' the term 'white' does not supposit for Socrates unless whiteness was related to him yesterday, whether or not it is still so related or was previously so related to him. ... But the subject appellates its thing indifferently and in a disjunctive manner for the present time and for the time of the verb, as is also the case with supposition (Buridan 1966, 113-114; 1977, 62-63).

Buridan's point is that the tense in sentences like (10) is not a sentential operator but instead modifies the supposition of the terms.

(10) White will be black.

Since it is in the subject position the term 'white' in (10) supposits for anything which is now white or anything that will be white in the future. In contrast, the term 'black' supposits only for those things which will be white in the future. Thus (10) is correctly parsed as (10b) (where t is the present time).

(10b) [Something] which is white at $t_n \geq t$ is black at time $t_m > t$.

Since in the posited case there is something—namely the piece of wood—which is one of the things which is white either now or in the future and also one of the things which is black in the future, the terms in (10) have overlapping supposition and thus (10) is true.

2.3 Signification formalized

Buridan's point can be made a little clearer by means of a formal notation for signification and supposition introduced by Klima.¹⁰ We begin by representing signification as a one-place function.

$$\text{SGT}(P) = v$$

This can be read as: the significatum of *P* is *v*. However in the case of appellative terms, the value of *v* will not be defined directly but by means of another one-place function. The values that this second function ranges over are the secondary significates of the term. On Buridan's account the secondary significates of the term 'white' are the whitenesses of the white things.

According to Buridan and other nominalists the secondary significates of a term like white are the particular whitenesses inhering in individuals. On this account 'white' signifies all those individuals who are the values of the following one-place function.

$$\text{SGT}_A(\text{'white'})(u) = w.$$

This should be read as: the signification of 'white' with respect to *u* is *w*. The permitted values for *u* are the secondary significates of 'white'—namely the individual whitenesses. Thus the signification of 'white' with respect to Socrates' whiteness is Socrates.

$$\text{SGT}_A(\text{'white'})(\text{Socrates' whiteness}) = \text{Socrates}$$

We can then define the signification of 'white' in terms of $\text{SGT}_A(\text{'white'})(u)$.

$$v \in \text{SGT}(\text{'white'}) \text{ iff there is some } u \text{ such that } \text{SGT}_A(\text{'white'})(u) = v.$$

In general, for each appellative term *Q* the $\text{SGT}(Q)$ is defined in terms of the function $\text{SGT}_A(Q)(u)$.

¹⁰ I have adapted Klima's notation somewhat.

2.4 Supposition formalized

Signification is a constant property of a term—at any moment the term 'white' signifies all those things that ever have been, are, or will be white.¹¹ However the supposition of a term is context relative, and the suppositum of an appellative term in common personal supposition is a function of its secondary significates. Consider (11) again.

(11) Socrates is white.

Since (11) involves a present tense verb and contains no ampliative terms, the relevant secondary significates are those that actually exist. Thus 'white' in (11) supposits for those individuals in whom whiteness currently inheres. If we represent the existents at a time t by D_t , we can capture this with the following formula (where t is the present).

$$\text{SUP('white')} = \text{SGT('white')(u)} \text{ for all } u \in D_t$$

Thus Socrates will be one of the things 'white' supposits for just in case Socrates' whiteness is among the things that currently exist.

In contrast, since (10) involves a tensed verb, the domain of relevant secondary significates is enlarged for all the terms in the sentence.

(10) White will be black.

For terms that appear before the verb the relevant domain includes all those secondary significates that exist now or at the time indicated by the verb, while for those that follow it the relevant domain of secondary significates includes only those which exist at the time of the verb. Thus in (10) (where t is the present time):

$$\text{SUP('white')} = \text{SGT('white')(u)} \text{ for all } u \in D_t \cup D_{t+1} \cup D_{t+2} \dots^{12}$$

¹¹ Some discussion of the merely possibly white should go here.

¹² It should be noted that Buridan is a temporal divisibilist—he believes that time is infinitely divisible into intervals and that there are no temporal instants (Buridan *Sophismata* Chapter IV 1966; 1977). Thus the time indexes here should be read as referring to intervals rather than instants of time.

$$\text{SUP}(\text{'black'}) = \text{SGT}(\text{'black'})(u) \text{ for all } u \in D_{t+1} \cup D_{t+2} \dots$$

3. *Buridan on intentional contexts*

The puzzles of intentionality were familiar to Buridan, and in the *Sophismata* he discusses a number of sophisms that exploit our anti-substitution intuitions (Buridan 1977; 1966). I begin with a familiar case of involving a propositional attitude and substitution.

3.1 You know the coins in my purse to be even in number.

Tenth sophism: You know the coins in my purse to be even in number.

It is proved, because you know every pair to be even in number, so you know every two to be even. But the coins in my purse are two; hence, you know them to be even.

The opposite is argued. I posit that you believe that in my purse there is only one coin, and so you believe there not be an even number of coins in my purse. Then it is argued thus: You do not know that whose opposite you believe, since opinions or beliefs about opposites—i.e, contradictories or contraries—cannot be in the same intellect simultaneously, because they are contrary, as is said in the fourth of the *Metaphysics*. But these are opposites; 'The coins in my purse are not even in number' and 'They are even in number' and you believe that they are not even. Therefore you do not believe them to be even. (Buridan 1966, 124-125; 1977, 72).

Buridan's tenth sophism of the chapter poses a familiar quandary. Given the posited case it seems that substitutivity of identicals provides a good argument for the claim that, intuitions to the contrary, (12) is true.

(12) You know the coins in my purse to be even in number.

3.2 Appellation and rationes

Buridan's explanation of the failure of substitution in this context is that propositional attitude verbs, semantic verbs like 'to signify', and also verbs like 'to owe', 'to promise' and 'to obligate', cause the terms that occur with them to appellate the mental concepts—or

rationes—that they derive their ultimate signification from (Buridan 1966, 126; 1977, 73). The terms which describe the object of the attitude or debt continue to supposit as usual but in addition appellate the concept by means of which the suppositum are understood. The relations in question are thus seen as a three-way ones between the subject, the object, and the way in which that object is understood.

Buridan distinguishes between two cases—the one in which the term occurs before the verb and the one in which it occurs after. In the later case the term appellates the particular concept of the suppositum that it is associated with. In the former case the term merely indicates the existence of some concept of that suppositum.

when it occurs after the verb, the term appellates the *rationes* proper to it determinately and precisely. But when the terms occur before the verbs, they appellate their *rationes* indifferently and in disjunction with the other ways the things signified can be signified or understood (Buridan 1966, 126; 1977, 74).

Thus (12) has the logical form of (12*) whereas (13) has that of (13*) (Buridan *Tractatus de consequentiis* 3.7.10).¹³

(12*) You know the coins in my purse to be even in number according the *ratio* by which they are called the coins in my purse.

(13) The coins in my purse are known by you to be even in number.

(13*) The coins in my purse are known by you to be even in number under some *ratio*.

In the case under discussion (13) is true but (12) is false (Buridan 1966, 134; 1977, 80-81). Buridan's solution is therefore closely allied with the neo-Fregean version of the hidden-indexical theory advocated by Graeme Forbes and discussed in chapter two. Like all advocates of hidden-indexical theories, Buridan maintains that the terms continue to have their usual supposition in propositional attitude contexts, but in addition play a role in providing the third relatum of the attitude. Moreover his account of the form of attitude ascriptions is similar to that of Forbes in that it has the term doing double duty as both a referring term and part of the specification of that third relatum.

¹³ Henceforth TC. See Buridan 1985.

3.3 The medieval hidden-indexical theory

The notation introduced above also allows us to capture the force of Buridan's solution to the problematic propositional attitude contexts. Buridan's opinion is that (12) was false but (13) was true.

(12) You know the coins in my purse to be even in number.

(13) The coins in my purse are known by you to be even in number.

This means that in (12) 'You' and 'know the coins in my purse to be even in number' must not have overlapping supposition, whereas in (13) 'you' and 'person by whom the coins in my purse are known to be even in number' must overlap in supposition. As discussed above, Buridan explains his solution by noting that the effect of the attitude verb is to cause the other terms in the sentence to appellate the concepts they are associated with. We represent the concept associated with a term by means of a one-place function:

$$\text{RAT}(P) = v$$

This should be read as: the concept determined by P is v. Thus in (12) the supposition of the whole predicate should be represented as follows:

$$\begin{aligned} \text{SUP}(\text{'know the coins in my purse to be even in number'}) = \\ \text{SGT}(\text{'know'}) \quad [\text{RAT}(\text{'coins in my purse'}) \text{ RAT}(\text{'is even in number'})] \\ [\text{SUP}(\text{'coins in my purse'}) \in \text{SUP}(\text{'is even in number'})] \end{aligned}$$

(I here suppress reference to the domain of presently existing things.) In other words, the predicate supposits for just those people who know that the suppositum of 'coins in my purse' is one of the supposita of 'even in number' by means of the concepts 'coins in my purse' and 'even in number'. Since in the posited case you are not one of those people, the two terms do not overlap in supposition.

In contrast, (13) is true just in case the supposition of 'the coins in my purse' is one of the things that is known by me to be even in number. Thus the supposition of the predicate of (13) should be represented as:

SUP('known by you to be even in number') includes SUP('Y') iff
 SUP('you') \in SUP('know X to be even in number') for some X such that
 SUP('Y') \in SUP('X')¹⁴

In other words, the supposition of 'the coins in my purse' is one of the things that is known by me to be even in number just in case I am one of the things supposed for by the phrase 'know X to be even in number', for some concept X which supposits for the coins in my purse (possibly along with other things). The role of the concept remains in 'know X to be even in number', since this is properly represented by:

SUP('know X to be even in number') =
 SGT('know') [RAT('X') RAT('is even in number')]
 [SUP('X') \in SUP('is even in number')]

However, since the only requirement is that the supposition of 'the coins in my purse' be included in that of 'X', the particular concept determined by 'X' no longer plays an essential role.

3.4 I owe you a horse

As mentioned above, Buridan includes the verbs 'to owe' and 'to promise' and related words among those that cause the terms appearing with them to appellate their *rationes*. In the *Sophismata* he closes his discussion of appellation with a discussion of a sophism involving the verb 'to owe'.

3.4.1 The sophism

Fifteenth sophism: I owe you a horse. (Or similarly: I owe you a denarius.)

I posit the case that for a good service which you performed for me, I promised you a good horse. And I have obligated myself before a competent judge to make

¹⁴ Notice that the relationship between the two suppositions is not required to be one of identity—Buridan claims that (13) is true because the addressee knows that all pairs are even in number and he has a pair of coins in his pocket. The coins in his pocket are but one of the pairs supposed for by 'pair'.

suitable payment to you of a good horse. Thus the sophism appears manifest, for it is commonly said that every promise is included in ones debt. ... And similarly, I posit that I bought some mustard from you for one denarius and I have not paid you. It follows that I owe you a denarius.

But the opposite is argued in a difficult way, conceding the aforementioned case. For I owe you nothing, so I owe you neither a horse nor a denarius. ... I assert the antecedent, because I do not owe you this horse, namely Morellus, nor this one; hence I owe you no horse. And consequently I owe you nothing, as I promised you nothing other than a horse. ...

I no more owe you Morellus than Favellus, since I no more promised you one than the other, and I could fulfil my obligation equally with one horse as with another. Therefore it follows that if I do not owe you Morellus, neither do I owe you Favellus, for the same reason. And the same is true of other horses. Therefore I owe you no horse...

But then I prove the antecedent, for just as was said at first, I owe you no more Morellus than Favellus. Hence I owe you either both or neither. If neither then the proposition is proved, namely, that I do not owe you Morellus. But it cannot be said that I owe you both, since I promised only one. Hence I owe you only one. And it does not follow that if I owe you one, then I owe you two (Buridan 1966, 137-138; 1977, 83-84).

3.4.2 The role of appellation

Buridan begins his commentary with the observation that, as he said before, the verb 'to owe' causes the terms following it to appellate the concepts with which they are associated, so that any substitution of the name of a particular horse—say Morellus—into (14) will result in a change in the appellation, and the resulting sentence will be false, since according to the case Buridan did not promise any particular horse.

(14) I owe you a horse.

The result of this is that the term horse does not have any of the possible modes of supposition—that is, it has no global quantificational effect. It is not possible to descend from

(14) to its singulars—if we assume, with Buridan, that there are only three horses that ever exist, (14) does not imply (15).

(15) I owe you Morellus, or I owe you Favellus, or I owe you Brunellus.

However (16) does follow from (14), and Buridan takes the situation with respect to (16) to be very different.

(16) A horse is owed by me to you.

'To owe', like the other intentional verbs, does not cause a term preceding it to appellate the particular concept associated with that term. Thus (16) does imply (17) (Buridan 1966, 138-139; 1977, 84-85).

(17) Morellus is owed by me to you, or Favellus is owed by me to you or Brunellus is owed by me to you.

3.4.3 How many horses?

The next difficulty is that (17) implies that one of its disjuncts is true. This raises a problem since there is in the posited case no more reason to say that Buridan owes you Morellus than that he owes you any of the other horses. Buridan's solution is to say that all of the disjuncts are true, and thus that (18) is also.

(18) Every horse is owed by me to you.

Buridan argues that his conclusion is not as counterintuitive as it might seem. First of all he notes that for each horse it is the case that his giving it to you would count as fulfilling his obligation. Since one cannot fulfill a debt except by paying what one owes, we might independently conclude that every horse is owed by him to you. Secondly, given that in the case the disjuncts seem to be either all true or all false, the alternative is to claim that no horse is owed, and this is obviously wrong.

Most importantly, Buridan distinguishes between (18) and (19).

(19) I owe you every horse.

The latter does not follow from the former because in (18) 'every horse' does not appellate the concept corresponding to it but only the existence of some concept under which its suppositum—namely all the horses—have been promised. But the concept under which they have been promised is not the one corresponding to 'every horse' but the one corresponding to 'horse'. Concerning the related question of whether it is true that he owes you the king's horse, Buridan writes:

I say that the king's horse is owed by me and to pay the king's horse I have obligated myself. Thus if I should buy that horse or if it should be given to me and I should pay, I would be freed. But neither do I owe the king's horse, nor am I obligated to pay the king's horse, nor can you demand the king's horse, except in conjunction with the others; for I have not promised that to you according to the reason for which it is called the king's horse, but according to the indeterminate and confused concept of this term 'horse' (Buridan 1966, 142; 1977, 88).

3.5 Taming the horse with notation

Buridan's justification for endorsing (16), (17), and (18) as consequences of (14) seems a little peculiar, but it makes more sense when we consider it in light of the formal notation introduced above. Consider (14) and (16) again.

(14) I owe you a horse.

(16) A horse is owed by me to you.

On Buridan's account the predicates of (14) has the following supposition in the posited case:

SUP('owe you a horse') =
 SGT('owe') RAT('a horse')
 [SUP('a horse') SUP('to you')]

Part of what is claimed by (14) is that the debt was incurred by means of the concept corresponding to 'a horse'. In contrast (16) is true just in case the supposition of horse overlaps with the supposition of 'is owed by me to you'.

SUP('is owed by me to you') includes SUP('Y') iff
 SUP('you') \in SUP('owe X to you') for some X such that
 SUP('Y') \in SUP('X')¹⁵

Since (16) is an existential sentence it is true just in case there is at least one thing supposed for by both 'a horse' and 'is owed by me to you'. That is, by the rules of suppositional descents, (16) implies (17) (where Morellus, Brunellus, and Favellus are all the horses that will ever exist).

(17) Morellus is owed by me to you, or Favellus is owed by me to you or Brunellus is owed by me to you.

As a disjunctive hypothetical proposition, (17) is true just in case one of the instances is. And while it is a little odd, we can see that each disjunct of (17) is true. Take the first disjunct. On Buridan's account it is true just in case the supposition of 'Morellus' is also supposed for by 'is owed by me to you'. But as we just saw this is so just in case:

SUP('you') \in SUP('owe X to you') for some X such that
 SUP('Morellus') \in SUP('X')

And of course, the supposition of 'Morellus' is one of the things supposed for by 'a horse'.

3.5.1 All the horses

So far this may seem unproblematic. However one counter-intuitive consequence of the truth of all of the disjuncts of (17) is that (18) is also true.

¹⁵ Notice that the relationship between the two suppositions is not required to be one of identity—Buridan claims that (13) is true because the addressee knows that all pairs are even in number and he has a pair of coins in his pocket. The coins in his pocket are but one of the pairs supposed for by 'pair'.

(18) Every horse is owed by me to you.

But this too follows directly from our formal account of the supposition of 'is owed by me to you'. As a universal (18) is true just in case everything supposed for by 'horse' is also supposed for by 'is owed by me to you'. And as we have seen, this is the case for each of our horses.

Buridan is willing to accept this consequence for two reasons. First of all, the truth of (18) does accord with our intuition that every horse is something which could be used to pay off the debt. Secondly, his theory leaves him free to deny that (19) is true.

(19) I owe you every horse.

The formal account also rules that (19) is false, since it would only be true if Buridan was one of the things supposed for by 'owe you every horse'.

$$\begin{aligned} \text{SUP}(\text{'owe you every horse'}) = \\ \text{SGT}(\text{'owe'}) \quad \text{RAT}(\text{'every horse'}) \\ [\text{SUP}(\text{'every horse'}) \text{ SUP}(\text{'to you'})] \end{aligned}$$

As the formalization shows, this would only be true if the debt was incurred under the complex concept formed out of the concept corresponding to 'horse' and that corresponding to the syncategorematic term 'every'. However in the case under discussion no debt was incurred under that concept.

3.5.2 Klima on owing a horse.

My account of Buridan's position on the semantics of (14), (16), and (18) departs from that of Klima in a number of ways. Klima treats 'equum tibi debens'—i.e, something like 'a horse is owed by x to you'—as the predicate of (16) (equum tibi debeo). He then gives the supposition of this predicate in terms of quantification over terms:

$$\text{SUP}(\text{'equum tibi debens'}) = \text{SGT}(\text{'debens'})\text{SUP}(\text{'te'})\text{RAT}(\text{'X'})\text{SUP}(\text{'equus'})$$

One consequence of this is the need to give a complicated account of the truth of (18) in terms of the result of substituting each individual supposed for by 'equus' in place of SUP('equus').

But regarding Buridan's claim concerning "Omnem equum tibi debeo", this amounts to saying that if this sentence is true, then for any choice of an individual *suppositum* of the term 'equus', the term 'debeo' signifies me with respect to that horse considered under any concept whatsoever (Klima 1993, 345)

This interpretation conflicts with what Buridan himself says about the king's horse. When discussing (20) what Buridan emphasizes is precisely that I do not owe the king's horse with respect to *any* concept whatsoever.

(20) The king's horse is owed by me (equum regis debeo)

In particular, the king's horse is not owed by me "according to the reason for which it is called the king's horse, but according to the indeterminate and confused concept of this term 'horse'" (Buridan 1966, 142; 1977, 88). Furthermore this claim of Klima's does not seem to fit with what he himself says elsewhere, and perhaps the mistake is caused by the awkwardness of his formal treatment. Accordingly, my account is to be preferred, since it preserves the medieval account of truth conditions in terms of sentence form and supposition, and provides a perspicuous account of why Buridan endorses the truth of (17) and (18).

3.6 The trouble with singular terms

What should now be abundantly clear is that Buridan's account, as interesting as it is, does not provide a general solution to the problem of singular terms in intentional contexts and certainly cannot be extended to cover the problematic simple sentences. Buridan will have all of the same difficulties with the puzzle of Lydia and the astronomers as do advocates of contemporary hidden-indexical accounts. Recall that Lydia is a beginning philosophy of language student who returns from her first class to report to her friend Martina what she has learned by uttering (21).

(21) No ancient astronomers believed that Hesperus is Phosphorus.

The puzzle is to give an account of the truth-conditions of (21) that will count the ancient Babylonians, the linguistically impoverished astronomers, and the seasonal cycle astronomer as counterexamples, but will not count those astronomers who merely believe in the identity of Venus with itself.

Buridan must treat (21) as true just in case the supposition of 'ancient astronomers' does not overlap with the supposition of 'believed that Hesperus is Phosphorus'. We represent his account the supposition of the predicate as follows:

$$\begin{aligned} \text{SUP('believed that Hesperus is Phosphorus')} = \\ \text{SGT('believe')} [\text{RAT('Hesperus')} \text{ RAT('Phosphorus')}] \\ [\text{SUP('Hesperus')} = \text{SUP('Phosphorus')}] \end{aligned}$$

There is of course no difficulty with claiming that the concept associated with 'Hesperus' is different from that associated with 'Phosphorus'. The difficulty arises, as for the other accounts, with specifying the concept associated with each term in such a way as to count all our counterexample astronomers as believing that Hesperus is Phosphorus. The problem is that the counterexamples do not share any concepts of Hesperus or Phosphorus. Buridan cannot accommodate this as his theory can only accommodate disjunctive specifications of concepts when the term is placed outside the scope of the verb, and in this case the belief that Venus is Venus would count as one of those specifications.

4. *Reference and Quantification*

Both Klima and Hintikka and Sandu suggested that the problems with singular terms arose as a result of Fregean approach to quantification. However it turns out that neither game-theoretic semantics or the neo-medieval treatment advocated by Klima can provide a satisfactory solution for the puzzle cases. The question which thus arises is why the idea that an alternative quantificational framework will solve the problems has seemed so tempting and resulted in so little success.

One reason for thinking that an alternative approach to quantification would solve the problems is that there is a close tie between quantifiers and referential terms. The common ground between the quantifiers of first-order logic, independence friendly quantifiers, and the restricted quantifiers of neo-medieval logicians is the reliance on the referential properties of variables. Furthermore it seems to many philosophers that there is an essential tie between

reference and quantification—it seems the very mark of a referential term that given the truth of (22), (23) follows.

(22) —a—

(23) $\exists x$ —x—

Part of the appeal of Russell's treatment of definite descriptions and descriptive theories of names is that they shift, as Quine puts it, "the burden of objective reference which had been put on the descriptive phrase ... [on to] ... bound variables, variables of quantification, namely words like 'something', 'nothing', 'everything' (Quine 1948, 6). As the slogan says, "to be is to be the value of a bound variable", and nothing else is available to be referred to.

The puzzles connected with the propositional attitudes and the simple sentences of chapter three arise because the names in them seem to refer neither to the things themselves—the planet Venus, the individual Clark/Superman—nor to our concepts of those things. The truth-conditions of these sorts of sentences have proven remarkably difficult to specify in terms of the sorts of entities that could be the values of a bound variable. And yet, as Kripke's arguments show, proper names do seem to be genuine referring terms—we cannot dispose of them in favour of descriptions.

Given such a dilemma it is no surprise that the fault might be thought to be located in the treatment of variables and quantification itself, and the remedy sought in a new quantificational theory. It is also no surprise that neither Klima's neo-medievalism nor game-theoretic semantics provide a solution. The late medievals like Buridan had at base the same approach to reference as the Fregean one, and the admitted a realm of entities that, while not co-extensive with ours, was at least as restricted. Similarly, despite Hintikka and Sandu's claims about the context sensitivity of cross-world identity, the variables of independence-friendly logic exhibit the same kind of bare reference and take the same values as the variables of traditional first-order logic. If the solution is to be found in an alternate view of variables and quantification that alternative would have to be a far more radical departure from current approaches than either neo-medievalism or game-theoretic semantics. I for one have no idea what such an alternative would be like.

CHAPTER SIX

Semantics, pragmatics and intuitions

Having rejected the idea that the problems associated with proper names and other singular terms are an artifact of the Fregean quantificational paradigm, I now return to the question of how we are to deal with the puzzle cases. The theory with the strongest position at the end of chapter three was the naïve theory, which maintains that all of the intuitions that co-referential terms differ in semantic content are to be explained in terms of pragmatic implicature. It is part and parcel of that account that we have difficulty recognizing the difference between semantically imparted information and pragmatically imparted information, and that this difficulty explains both our pre-theoretical convictions and our unwillingness to accept the naïve theory,

In this chapter I argue that the distinction between semantically imparted information and pragmatically imparted information does not match the distinction between what is said and what is merely implied, and conclude that any inability to recognize the difference between the former phenomena does not carry with it any implications about our ability to recognize the latter. I then discuss what criteria may be used to distinguish semantic content from implicature and argue that the correct one is the availability principle championed by Francois Recanati. However, since according to this principle language users do have the ability to distinguish semantic content from mere implicature, this means that the naïve theory's account of the origins of our anti-substitution intuitions cannot be correct.

1. *The naïve theory*

At the end of the discussion of the counter-examples I concluded that the naïve view, despite facing some difficulties, was in the strongest position. The tenability of the naïve view, however, depends on the plausibility of the claim that we misidentify the origins of the anti-substitution intuitions. On the naïve view our intuitions about the truth conditions of various sentences containing proper names and other singular terms are to be explained not in terms of the semantic properties of those sentences but in terms of their pragmatic properties. The naïve theorists view, to summarize, is that the semantic content of singular terms is exhausted by their referents. On this view, the truth of (1) guarantees the truth of (2), (3) that of (4), and vice versa in each case.

- (1) Clark Kent went into the phone booth and Superman came out.
- (2) Superman went into the phone booth and Superman came out.
- (3) Lois believes that Superman can fly.
- (4) Lois believes that Clark Kent can fly.

Since they differ only in that they contain different co-referential names, then the proposition expressed by (1) is the same as that expressed by (2). The case of (3) and (4) is parallel.

Salmon and Soames' standard account of our inclination to reject the result that (3) and (4) have the same truth conditions is that (3) and (4), in addition to saying *what* Lois believes, carry with them certain pragmatic implicatures about *how* she believes it. Thus the claim of the naïve view is that *what is said* by (1)—its semantic content—is identical to the semantic content of (2), but that *what is pragmatically implicated* by (1) differs from what is implicated by (2), and thus our intuitions about the assertability of the sentences differ. Furthermore, language users are generally insensitive to the difference between pragmatically provided information and semantically provided information, and so identify both components as part of the content of (1).

Now the approach of the naïve theorist is to argue that we can privilege some of our intuitions about the semantic content of names—namely those which are in their favour—and explain away the rest in terms of pragmatic features of language. I want to emphasize here that the question is whether we can ever be *wrong*, collectively and systematically, about our own language. For it is exactly that kind of mistake that is at issue in the writings of defenders of the naïve view. For example, Salmon writes:

Even when the ordinary usage of a certain locution is systematic, it can be systematically incorrect—if, for example, the language is deficient in certain ways that compel speakers to violate its rules in order to convey what they intend, or if the principles or social conventions governing the appropriateness of certain utterances require certain systematic violations of the principles and rules governing correct and incorrect applications of the terms used (Salmon 1986, 84)

and further:

It is no embarrassment to the modified naïve theory that ordinary speakers typically deny literally true belief attributions (and other propositional attitude attributions) ... With widespread ignorance of the significance of the distinction between semantically encoded and pragmatically imparted information, such violation of the rules of the language is entirely to be expected (Salmon 1986, 85).

Salmon's view, to summarize, is that we systematically use a particular locution incorrectly—namely to communicate something other than what the locution is linguistically appropriate for communicating—and that we do so in part because we are ignorant of a basic distinction built into our linguistic practice, and in part because our language is not actually up to the job that we put it too.

Now Salmon's view, as stated, seems in part to be manifestly absurd. If we systematically use language to communicate something, then it surely cannot be correct to say that the language is inadequate to the job. It is less obviously mistaken to say that we could use a certain locution systematically but incorrectly, but this also seems to exhibit some internal tension. It seems at first glance that the mere fact that language is a conventional system ensures that we cannot be wrong in this way. After all while, *poisson* is the French word for fish, there seems no reason why it couldn't have been the word for dogs, and the fact that it isn't seems just to be a fact about how French speakers (collectively) use the word. Of course there are cases where a word (or sentence, or phrase) is ambiguous—but this *too* is a fact about our usage. What gives Salmon's view whatever plausibility it has is the idea that this mistake arises from ignorance about the distinction between what is said and what is implied. The problem with the view that we can be ignorant of this distinction is that it reflects a misunderstanding about how theories of conversational implicature work.

1.1 The role of intuition

One obvious objection to the naïve account is that the intuitions attached to (3) and (4) do not behave like the intuitions associated with standard examples of pragmatic implicature. Consider, for example, the intuitions concerning the temporal order of the events described by (5).

(5) They fell in love and moved in together.

It is remarkably easy to convince someone that (5) is true in the case where the subjects move in together prior to falling in love, and that intuitions to the contrary are the result of conversational implicature. The idea that (5) would in such circumstances be pragmatically misleading but strictly speaking true is appealing—in part because it fits in nicely with the view that in many other circumstances—e.g. (6)—there is no suggestion of temporal ordering.

(6) He bought a new shirt and rented a tuxedo.

In contrast, our intuitions about (3) and (4) are remarkably robust. As Mark Richard points out:

Other than using bribery, threats, hypnosis, or the like, there is simply nothing you can do to get most people to say that Jones believes that Tully was an orator, once they know that Jones sincerely denies 'Tully was an orator', understands it, and acts on his denial in ways appropriate thereto. In particular, pointing out that Jones can express something he believes with 'Cicero was an orator' seems simply irrelevant to most people (Richard 1990, 125).

Even exposing people to the counterparts to (6)—namely cases where co-referential names are substitutable, as in the Ruth Barcan Marcus example of chapter two—does not increase the appeal of the pragmatic story.

1.2 Are our intuitions irrelevant?

Jennifer Saul has argued that this resistance does not necessarily tell us much about the correctness of the claim that the intuitions concern pragmatically provided conversational implicatures (Saul 1998, 364). Sentences like (5), she suggests, are paradigm cases used to illustrate the phenomena of conversational implicature. It is precisely because they are easily recognized and almost universally accepted that they are used to explicate the concept. It would be surprising if all cases of pragmatically provided implicatures were as clear and obvious as these cases, and it is unreasonable to expect this. The fact that our intuitions are hard to overcome should not be given too much weight. Nor, argues Saul, is the case that our intuitions are as immovable as is suggested, for while it is not easy to convince people that (4) is in fact true but merely implicates something false, it is not as difficult as convincing people that (7) is true and merely implicates something false.

(7) Richard Nixon was President of the United States of America on August 16, 1999.

Her claim is that nothing we could do other than proposing an elaborate political conspiracy theory could induce anyone to give up the view that (7) is literally false. In other words, the intuition that (4) is literally false is supposed to be stable, but not as stable as the intuition that (7) is literally false. Now, it is not obvious to me that it is easier to get people to give up their intuitions about (4) than it is to get them to give up their intuitions about (7). But even allowing that it is, this does not show that the intuitions are too unstable to be intuitions about the semantic content of the utterance.

1.3 Paradigms and fuzzy distinctions

Saul's view is that (5) and similar sentences are merely the paradigm cases of pragmatic implicature—they are the teaching cases for the distinction. Other cases may well

be less obvious. But it is unclear what this means. It might mean that the concept of pragmatic implicatures is a vague or fuzzy one, like bald. The man with no hair on his head is a clear case of baldness, and may be used to illustrate the concept. However, there are plenty of borderline cases where it is not obvious whether the person is correctly described as bald. Unfortunately, while this approach will have the consequence that it may not be obvious whether an aspect of what is communicated is part of the semantic content or part of the pragmatically provided implicatures, the fuzzy distinction will not do the work that the Soames-Salmon view requires. One feature of fuzzy concepts is that there may well be *no* answer to the question of whether the concept applies to a particular case or not. The best we may be able to say is that a particular man is slightly bald. But if the best we can say about an aspect of what is communicated by (3) and (4) is that it is partly a matter of pragmatic implicatures, then we are not in a position to say that the semantic content of these expressions is simply that ascribed by naïve view. A man who is slightly bald also almost has a full head of hair, and if the distinction between what is said and what is merely implied is a fuzzy one, then an aspect of what is communicated that is partly a matter of pragmatic implicatures is also somewhat a matter of semantic content, and the semantics of (3) and (4) must reflect that.

In short, the semantic/pragmatic distinction cannot be a fuzzy or vague one if it is to do the work required by Salmon and Soames. In particular, there must be ways (at least in principle) of determining whether a given piece of information is part of the semantic content or a merely pragmatic feature of the utterance. The fact that our initial intuition that (5) implies a particular temporal order is so easily overcome is not just an accidental feature of the paradigm cases that makes them good teaching cases, but in fact itself a way of testing whether the implication is merely a pragmatic one. The implications associated with (3) and (4) *fail* this particular test, and this is why the stability of our intuitions is seen as an objection to the Soames-Salmon view.

Saul's conclusion is that the only alternative way to evaluate the Soames-Salmon view is to see whether or not we can describe how the pragmatic implications come about. But this is to ignore the fact that other tests for differentiating pragmatic implicatures from semantic content. What Saul should have said is that this is not the *only* test of whether an implication is a pragmatic one, and thus that failing it is not conclusive evidence against the naïve account. The question this raises is threefold—what is the distinction between what is said and what is merely implicated; what is the relationship between this distinction and the distinction between semantics and pragmatics; and how can we tell content from implication?

2. *What is said versus what is implied*

The distinction between the content of an utterance (what is said) and its implicatures originates with H. P. Grice (1961, 1975, 1978, 1989). Grice offers both a characterization of

the distinction and a theoretical framework for explaining how the various kinds of implicatures arise. This framework emphasizes the role of the maxims guiding our conversational exchanges in generating the implicatures of our utterances. Subsequently the study of conversational maxims has split into two schools—those still following the Gricean framework, and those advocating the principles of relevance theory.

2.1 The Gricean view

On the account advocated by both Grice and his followers and relevance theorists, there is an important distinction to be made between what is said with an utterance, and what is implicated. What is said when someone utters (8) is a function of the linguistic meaning of the sentence (what Grice calls the conventional meaning) and the context.

(8) I have just eaten.

The role of the context is of course necessary because of the use of the indexical. In some cases, like that of "I", the linguistic meaning of the indexical is a simple function from the context to the referent, but in other cases, like that of "this", the referent may be determined partly through pragmatic means. Nevertheless, in either case I do not know *what is said* (i.e., what the semantic content of the utterance was) until I know enough about the context to fix the reference of the indexical. As Grice points out in his original paper (Grice 1975, 158), it is likely also features of context that disambiguate between the two meanings of "vice" in "He is in the grip of a vice". Whether the man in question is unfortunate enough to have part of his body stuck in a tool or is rather under the influence of a less than desirable aspect of his character is a matter of what is said, and this is so even if the ambiguity is resolved pragmatically.

In contrast, what is implicated by an utterance is what is implied, suggested, meant, etc. When, to adapt Grice's example, I say that our mutual acquaintance Linda hasn't been arrested yet, I suggest that she is likely to be arrested. Nevertheless, that she is likely to be arrested is not in Grice's view part of what is said—it is merely implicated. Similarly, if I utter (8) in response to the question "Would you like to have lunch?", I implicate, but not say, that I do not want to go.

2.1.1 Conventional implicature

Grice identifies three kinds of implicatures—conventional implicatures and generalized and particularized conversational implicatures. Conventional implicatures are, according to Grice, implicatures which stem from the conventional meaning of words but

which nonetheless do not enter into the truth conditions of what is strictly speaking said. One of Grice's own examples was 'therefore' in (9) (Grice 1975).

(9) He is an Englishman and therefore brave.

On his view, the suggestion that his bravery is a consequence of being English is an implicature and not part of what is said. What is said is merely that the subject possesses both properties—being English and being brave. However, the use of the word 'therefore' serves, through its conventional meaning, to implicate the consequential claim. Similarly, consider the difference between (10) and (11).¹

(10) She is poor and honest.

(11) She is poor but honest.

On Grice's view (10) and (11) have the same truth-conditional content, but because of the use of 'but' (11) carries with it a metalinguistic commentary to the effect that the second conjunct is surprising, or contrasts with the first conjunct in some way.

We might well dissent here, thinking that in (9) we say, and not merely implicate, that the consequence holds, but (11) may be a less controversial example. It is interesting to note that in the case of (11) the implication—that the speaker thinks the second conjunct contrasts with the first—could hardly fail to be true if the speaker is speaking truthfully. In contrast the implication of (9)—that the relation between the two properties is that of consequence—is much more likely to be false. In any case, conventional implicatures, if they exist, are part of the linguistic meaning of the sentence uttered, but are not part of what is said—the semantic content.

Nathan Salmon has suggested that in the case of belief ascriptions additional information is conveyed by means of either conventional implicature or generalized conversational implicature (Salmon 1989, 252-253; 275f11). It is fairly easy to see that it cannot be by conventional implicature. Conventional implicatures are called 'conventional' because they are part of the conventional (i.e., linguistic) meaning of the word or phrase that gives rise to them. As a result they arise independently of the circumstances of the conversation or contingent facts about the context of utterance. In contrast the problem with belief reports and the other puzzle cases is precisely that the acceptability of substitution is highly context sensitive.

If the problem was restricted to propositional attitude attributions then it might be possible to defend the view that the conventional implicature involved in the puzzle cases itself involved a contextual element. The defender of the naïve view might claim that the use

¹ This example is from Grice 1961.

of an attitude term carries with it a conventional implicature to the effect that there is some contextually specified relation between the that-clause and the way in which the state of affairs in question is thought of. Unfortunately the simple sentence puzzles show that the intuition can arise in the absence of any propositional attitude verb. Since conventional implicatures are associated with the use of some word or phrase, this means that we must locate the origin of the conventional implicature with the use of the name itself. However, since the implicature doesn't arise with every use of the names in question—or even with most or a substantial number of uses of them—it must be a conversational implicature.

2.1.2 Conversational implicature

Both generalized and particularized conversational implicatures arise from the fact that our conversational exchanges are generally cooperative ventures—regardless of other conflicts, the participants have some common goal, if only the minimal one of successful communication. Accordingly, suggests Grice, we are generally guided by the *cooperative principle*—"make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged" (Grice 1975, 158-9). The difference between the two types is that generalized conversational implicatures are relatively context insensitive—they do not depend upon any particular details of the conversational situation (Grice 1975, 165).

Assuming that we are guided by the cooperative principle—or in any case something similar to it—Grice identifies four categories of conversational maxims: Quantity, Quality, Relation, and Manner.

Grice's maxims:

Quantity

- A1. Make your contribution as informative as is required by the purposes of the exchange.
- A2. Do not make your contribution more informative than is required.

Quality

- B. Try to make your contribution one that is true. (*supermaxim*)
- B1. Do not say what you believe to be false.
- B2. Do not say that for which you lack sufficient evidence.

Relation

- C. Be relevant

Manner

D. Be perspicuous (*supermaxim*)

D1. Avoid obscurity of expression.

D2. Avoid ambiguity.

D3. Be brief. (avoid unnecessary prolixity).

D4. Be orderly.

(Grice 1975, 159).

With these maxims come failures to fulfil them, but what is important to the Gricean account is that we can fail to fulfil them in importantly different ways (Grice 1975, 161). We may:

F1. Quietly and unostentatiously *violate* a maxim (as when one lies).

F2. *Opt out* of the maxim (and the cooperative Principle). This will generally be indicated, as when one says "I cannot say more," or, "my lips are sealed."

F3. *Flout* a maxim, i.e. *blatantly* fail to fulfil it.²

In general it is the assumption that we are operating in accord with the cooperative principle that generates implicatures. Indeed, it is this that allows Grice to offer a characterization of these implicatures:

A man who, by (in, when) saying (or making as if to say) that *p* has implicated *q*, may be said to have conversationally implicated that *q*, *provided that* (1) he is to be presumed to be obeying the conversational maxims, or at least the cooperative principle; (2) the supposition that he is aware that, or thinks that, *q* is required in order to make his saying or making as if to say *p* (or doing so in *those* terms) consistent with this presumption; and (3) the speaker thinks (and would expect the bearer to think that the speaker thinks) that it is within the competence of the bearer to work out, or grasp intuitively, that the supposition mentioned in (2) *is* required (Grice 1975, 161).

In the example given above, where I utter (8) in response the question "Would you like to have lunch?", I am failing to obey the maxim *be relevant* unless there is some connection between my having eaten recently and the answer to the question.

² Grice proposes that being faced with a *clash* between maxims is a way of not fulfilling a maxim, but as others have noted (e.g. Martinich 1996, 119), a clash is a reason for not fulfilling a maxim, not a way of not fulfilling one. Martinich also suggests that F1-3 should be supplemented by *suspending* a maxim, which covers cases in which a maxim is permanently opted out of. His example is the U.S. Senate, in which filibustering is permitted. Theatrical performances might constitute another example. However, this seems a difference in degree rather than in kind.

(8) I have just eaten.

Given the background information that people usually prefer to space out their meals over time the obvious assumption is that I do not want to have lunch. In case of

(5) They fell in love and moved in together,

the implication appears given the background information—people usually fall in love before moving in together—and the assumption that I am acting in accord with the maxims *be orderly* and *make your contribution as informative as is required*. The default context of (5) is one in which the information that the order is not the expected one is required.

Despite the inclusion of 'grasp intuitively' in the definition above, Grice explicitly says that conversational implicatures must be capable of being worked out—"if it can in fact be intuitively grasped, unless the intuition is replaceable by an argument, the implicature (if present at all) will not count as a *conversational* implicature; it will be a *conventional* implicature" (Grice 1975, 161 emphasis in original).

The main point of all this is that possibility of neo-Gricean conversational implicature depends on the speaker being able to work out the implication on the basis of the assumption of the cooperative principle and knowledge of what the utterance actually says. It must, as Grice puts it, be calculable. Salmon's defense of the naïve view against our recalcitrant intuitions is that we are ignorant of the true meaning of the belief attributions—that we mistake their pragmatic content for their semantic content. But if this is the case, then neo-Gricean pragmatics can supply no explanation for where those implications come from. Grice's pragmatic explanations rely on the very knowledge of the semantic content of the utterances that Salmon denies we possess.³

2.2 Relevance Theory

The primary competitor to a Gricean account of pragmatics is relevance theory, which was introduced by Dan Sperber and Deirdre Wilson in their 1986 book *Relevance: Communication and cognition*. Central to Sperber and Wilson's view is the idea that linguistic

³ In his (1989) Salmon rejects Stephen Schiffer's claim in (1987b) that his view is not compatible with the Gricean account of implicature. However Schiffer's argument depends upon the audience having to know that what was said by an utterance is strictly false (Schiffer 1987b, 466-471), and Salmon correctly rejects this (Salmon 1989, 252-253), pointing out that implicatures can arise due to violations of maxims other than the maxim of quality. The point here is more general—regardless of what maxim is involved in the implicature, the generation of conversational implicatures depends upon the audience knowing what was strictly and literally said by the utterance.

communication (and indeed human cognition in general) is governed by a search for relevance. Grice, it seems, was on the right track with his undeveloped single maxim of relation—*be relevant*—and his comments to the effect that the second maxim of quantity might be unnecessary if the maxim of relation was properly understood (Grice 1975, 159). What he failed to do, if relevance theory is right, was notice that in fact every maxim—and indeed the cooperative principle itself—can be replaced by the single notion of relevance.

Sperber and Wilson (S&W) define relevance in terms of an interaction between the cognitive effects of information and the processing effort required to acquire it. The interaction between new information and existing assumptions produces cognitive effects such as strengthening existing assumptions, contradicting and thus eliminating existing assumptions, or combining with existing assumptions to allow inferences to further new information. In principle, the greater the cognitive effects the more relevant a piece of information will be. However, these cognitive effects do not, as S&W put it, come for free. All cognitive effects cost some mental effort to arrive at, and this effort can serve to lower the relevance—the greater the effort required, the less relevant the information. S&W's base assumption is that any utterance is a request for the hearers attention, and thus comes with the expectation that it will be relevant enough to be worthy of this attention.

Relevant enough, on S&W's view, is captured by the notion of optimal relevance.

Optimal relevance

An utterance is optimally relevant iff:

- (a) it is relevant enough to be worth the addressee's effort to process it; and
- (b) it is the most relevant one compatible with the communicator's abilities and preferences (Sperber and Wilson 1986/1995: 260-78).

The presumption that any utterance carries with it is that it is optimally relevant, and it is this presumption (dubbed the *communicative principle of relevance*) which S&W use to explain various pragmatic effects, including disambiguation and conversational implicatures. Of course, not all utterances are actually optimally relevant, and hearers may still process the irrelevant ones. They do so by rejecting or accepting interpretations of an utterance according to whether they are consistent with the communicative principle:

An utterance, on a given interpretation, is consistent with the principle of relevance if and only if the speaker might reasonably have expected it to be optimally relevant to the hearer on that interpretation (Wilson and Sperber 1998, 11)

In other words, what matters for determining conversational implicatures and resolving ambiguities is not the actual optimal relevance of the utterance on a particular interpretation, but the reasonableness of the presumption of optimal relevance by the speaker.

According to relevance theory, hearers can be expected to go through a process of considering possible interpretations along a path of least resistance—that is, by evaluating the most accessible interpretation first, and so on—and to stop when the expected level of relevance is reached (this level varies along with the speaker's abilities and preferences). In the case of:

(5) They fell in love and moved in together,

an utterance which puts events in the order in which they occurred will be more relevant—add more information while requiring little extra processing—than one which doesn't.

Despite its departures from the Gricean viewpoint, relevance theory is still what Robyn Carston calls post-Gricean (Carston 1998, 227). While it rejects the cooperative principle which characterizes neo-Gricean accounts, it still shares the inference based approach. We might therefore expect it to also share a version of Grice's calculability principle for conversational implicatures, and indeed Carston describes Sperber and Wilson's work as a development of an account of "the inference processes involved in the derivation of implicatures" (Carston 1988, 157). What distinguishes relevance theory from Gricean theory is not a denial of the inference process, but rather a view of that process as involving the formation and testing of hypotheses rather than a deductive process. For relevance theory the explanation of pragmatic implicatures depends upon us being able to work out the implication on the basis of the assumption that it is compatible with the communicative principle of relevance and a knowledge of what is said. Again, Salmon's defense of the naïve view maintains that we confuse the pragmatic content of belief attributions with their semantic content. But, just as in the Gricean case, the relevance theorists' explanations of pragmatic implications rely on the very knowledge of the semantic content of the utterances that Salmon denies we possess.

The obvious response on behalf of the naïve view to this charge, however, is to argue that while we must, in some sense, know what the semantic content of an utterance is in order for a pragmatic explanation to work, there is no reason to think that we know that we know. In other words, while pragmatic theories of conversational implicature like those of Grice and Sperber and Wilson require the semantic content to be available for pragmatic processing, there is no reason to think that it must be consciously available to the speaker or the hearer. Calculable, on this view, does not mean consciously calculable. If this response is right, then we need to investigate whether there are any other ways of identifying conversational implicatures available to us.

3. Recognizing implicatures

3.1 Detachability and cancelability

In addition to calculability, Grice suggests that conversational implicatures would have the properties of being non-detachable and cancelable. A supposed implicature is non-detachable insofar as we cannot find an alternative way of saying the same thing which does not have the implicature. The first point to note is that this test only applies to implicatures that are consequences of what is said, not how it is said. Secondly, since this test depends on us having a prior knowledge of what is said by an utterance, at best it can serve to distinguish conversational from conventional implicatures. In fact, as Grice himself notes, it not even a sufficient test for conversational implicature, as entailments and, if they are to be treated as a separate class, presuppositions (Have you stopped beating your wife?) will also exhibit non-detachability (Grice 1978, 115).

Grice also claims that all conversational implicatures are cancelable, either explicitly or contextually. A putative implicature that p is explicitly cancelable just in case it is not incoherent to follow up the utterance supposed to implicate p with the words "but not p " or "I don't mean to imply p " or some such. It is contextually cancelable just in case we can imagine some situation in which the utterance will not carry the implicature. However, while all conversational implicatures may well be cancelable,⁴ cancelability cannot serve as a test for the presence of a conversational implicature. In cases where an utterance is genuinely semantically ambiguous we may be able to apparently cancel the unintended reading. Jerrold Sadock gives the following example (Sadock 1978, 293): 'Everyone speaks one language. This is normally thought to be ambiguous between two readings, one which gives narrow scope to the existential quantifier, and one giving wide scope. However, the sentence 'Everybody speaks one language, although no one language is spoken by everyone' is perfectly sensible, and shows that the wide scope reading is cancelable. This does not, however, tempt us to view the wide scope reading as a mere conversational implicature. What is being cancelled is one of two possible readings, not an implicature. Indeed, in many cases where there may be debate over whether something is a conversational implicature or a genuine ambiguity cancelability will not serve to distinguish between cases.

3.2 The modified Ockham's razor

Grice of course is well aware of this difficulty, and it is for this reason that he proposes the *Modified Ockham's Razor* (MOR): senses are not to be multiplied beyond necessity (Grice 1978, 118). The idea here is that one should not propose an ambiguity unless

⁴ Sadock (1978, 293) claims otherwise.

the ambiguity does some work—Grice suggests that an ambiguity might do some work if explains the ease of a particular range of use, or the fact that a certain kind of use, which would otherwise seem legitimate, is in fact uncomfortable. He also says that we should not posit semantic ambiguity when the special use of the word is predictable given the other use.

Recanati points out that the MOR will not do as a test for when something is a conversational implicature rather than part of what is literally said in that it fails to distinguish between different kinds of pragmatic processes (Recanati 1993, 237). The Gricean picture assumes that there are only two possible explanations for apparently different uses of a word—either it has two distinct linguistic meanings, or the difference is a result of conversational implicatures. We have, however, already noted that some contextual features are required to fix the reference of indexicals like the 'I' in (8).

(8) I have just eaten.

What may not be obvious from this particular example, however, is the degree to which pragmatic considerations are involved in determining what is said. In (8) the indexical seems to carry with it as part of its linguistic meaning a precise rule for identifying the referent—it is the speaker of the context.⁵ However, in a case like (12) pragmatic features play a much greater role.

(12) She bought John's book.

First of all, fixing the reference of 'she' involves much more than following a simple linguistic rule of the sort associated with 'I'. She may be the woman previously under discussion, or the one who just walked by, and it is a pragmatic process that determines which. At most the linguistic meaning of 'she' requires that the referent be female.⁶ Secondly, it is pragmatic processes that serve to specify the relation between John and the book. An utterance of (12) may say that Carolyn has bought the book written by John, or that she has bought the book John was trying to sell, or that she has bought the book John wanted to buy. Which relation is selected will depend largely on which is relevant to the conversation at hand.⁷

Indeed, consideration of examples with unarticulated constituents like:

⁵ In chapter seven I argue that this precision is only apparent.

⁶ At most, since in some circles it is usual practice to refer to transvestites as 'she', and, while the content of the rest of the sentence rules it out in this case, 'she' has traditionally been the correct pronoun for ships and various other inanimate objects.

(13) It is raining.

show that pragmatic processes can sometimes be essential for anything to be said at all: (13) does not express a proposition unless completed by a contextually supplied place and time. Recall that in the case of (13) the unarticulated constituents are usually the place and time of the utterance, so that (13) is correctly read as:

(14) It is raining {here} {now}.

However this is not always the case. We could well imagine the weather forecaster saying "And now to tomorrow's weather in Wellington. It's raining." In this case (13) is properly completed as:

(15) It is raining {in Wellington} {tomorrow}.

It is pragmatic processes operating in the context that disambiguate between (14) and (15) as readings of (13).

Now it seems right to think that the place and time indexes are part of what is said, because (13) does not express a complete proposition without such indexes, and thus is not truth-evaluable. Grice's principle tells us to prefer a pragmatic explanation to one on which (13) is mysteriously semantically ambiguous between (14), (15), and countless other readings, and this is surely right. The consequence however is that we must accept that the linguistic meaning of sentences may underdetermine what is said, and that pragmatic processes sometimes contribute to what is said rather than to what is merely implicated. The MOR cannot help us to separate pragmatically determined aspects of what is said from what is pragmatically implicated by an utterance.

3.3 Minimalism

Despite the failure of the MOR many people have been sympathetic with its minimalist approach towards semantic content, and have offered alternative minimalist principles for distinguishing semantic content from implicature: the *linguistic direction principle*, the *mixed minimalist principle*, and the *minimal truth-evaluability principle* (Carston 1988, 163-4; Recanati 1993, 240-242).

⁷ Recanati describes this as *free* rather than *controlled* context dependence, "in the sense that the linguistic meaning of a context-sensitive expression constrains its possible semantic values but does not consist in a 'rule' or 'function' taking us from context to semantic value" (Recanati 1989, 99)

3.3.1 Linguistic direction

Linguistic direction: a pragmatically supplied aspect of what is communicated is part of what is said just in case it is triggered by the grammar of the utterance—that is, just in case the sentence sets up a slot which is to be filled.

On this view, context sensitive expressions set up 'slots' which need to be filled before one knows what is said. For example, to know what is said by "He bought a loaf of bread", one must determine who the reference of *he* is—and that it was that particular person who purchased the loaf of bread is part of what is said.

This linguistic direction principle will not do, however, if we do not wish to count conventional implicatures as part of what is said (Recanati 1993, 240). Recall that in (11) the linguistic meaning of 'but' is to be treated as carrying a conventional implicature about the relationship between the conjuncts.

(11) She is poor but honest.

In a sentence of the form 'P but Q', the 'but' (on this account) serves to highlight a certain attitude of the speaker towards the relationship of Q to P. In other words, 'P but Q' can be parsed as containing a certain kind of metalinguistic commentary such that it should be read roughly as 'P and Q (and I think that Q is surprising given P).' However, the truth conditions of 'P but Q' are just those of 'P and Q.'

The metalinguistic commentary is triggered by the use of 'but', and so by the linguistic direction principle, the commentary is part of what is said. Linguistic direction is not sufficient for being part of what is said.

3.3.2 Mixed minimalism

Mixed minimalism: a pragmatically supplied aspect of what is communicated is part of what is said just in case (i) it is triggered by the grammar of the utterance—that is, just in case the sentence sets up a slot which is to be filled—and (ii) the slot must be filled in order for the utterance to be truth-evaluable (i.e. in order for it to express a proposition).

The failure of linguistic direction as a sufficient criteria for being part of the semantic content of an utterance leads is the motivating factor for mixed minimalism. This principle adds the further requirement that pragmatically provided information must be required for the utterance to express a complete proposition. However, as Perry observes, our old friend (13) shows that the linguistic direction requirement is not necessary (Perry 1986, 138).

(13) It is raining.

If I utter (13) on the morning of August 31 1999 in Canberra, then what I have said is true just in case it is raining in Canberra on that morning. That it is raining in Wellington, or Vancouver, or Los Angeles is irrelevant—that rain doesn't matter to the truth of my utterance of (13). But the place of my utterance of (13) is certainly not supplied or triggered by any part of (13). Unarticulated constituents show that linguistic direction is not even necessary for a pragmatically provided piece of information to be part of what is said..

3.3.3 Minimal truth-evaluability

Minimal truth-evaluability: a pragmatically supplied aspect of what is communicated is part of what is said just in case its contextually determined content is required for the utterance to be truth-evaluable (i.e. in order for it to express a proposition).

The acknowledgment of unarticulated constituents leads to the third of our minimalist principles, which maintains that what is said includes only what is needed for an utterance to express a proposition. However both Carston and Sperber and Wilson have argued that even this principle is too strong (Carston 1988: Sperber and Wilson 1986/1995). Their case rests on examples like (16) and (17):

- (16) a. It will take some time to get there.
- b. The park is some distance from where I live.
- (17) I have had breakfast.

Consider, to begin with, (16b). We can produce a truth-evaluable proposition simply by fixing the reference of 'I' and 'the park'. The proposition expressed by me with (16b) will be true just in case I do not live in the park—that is, as long as there is *some* distance, no matter how small, between where I live and where the park is. However, this will not normally be information of interest to my audience—in fact, it is not information that a speaker is likely to want to convey on any occasion, and on those occasions when a speaker does want to state that she doesn't live in the park she will likely do so simply by uttering (18):

(18) I don't live in the park.

Generally, (16b) will be used to convey that the park is further away than the audience thinks, or that it is too far for some proposed activity like walking there. Similar considerations apply to (16a), which will normally convey that it will take a significant amount of time to get to the

destination, and (17), which generally conveys that one has had breakfast on the day of utterance, rather than that one has had breakfast at some time or other during one's life.

Philosophers who subscribe to something like the principle of minimal truth-evaluability will want to maintain that the proposition expressed by (16b) is simply the claim that there is some distance between the park and my house, and that everything else conveyed is mere implicature. Carston's view, in contrast, is that the restriction of the domain of the existential quantifier to a more specific group of distances is part of what is said (e.g., { x : x is greater than the audience's estimate of the distance}, or { x : x is too far to walk}). Her main objection to the view that the minimal proposition is what is said (in Carston's terminology, the *explicature*) by a use of (16b) is that on such a view the proposition expressed is cognitively inert:

But what function then does the explicature have in the mental life of the hearer? It is entailed by the implicature: if the park is further away from my house than the hearer had been assuming, it follows that it is some distance or other from my house. When this entailment relation holds between putative implicature and explicature the probability of functional independence of the two propositional forms is very low. What the hearer is going to remember from this utterance is some estimate of the distance involved, not the fact that there is a distance, and any inferences he draws on the basis of the utterance will involve the proposition concerning this amount of distance, rather than the basic proposition concerning the existence of a distance, a truism which has long been an assumption he has subscribed to. ... It's difficult to see any justification for a principle along the lines of 'use the maxims just in order to get a minimally truth-bearing vehicle'. This is to ignore the nature of communication and of cognition in general in the interests of a formal principle which has absolutely no bearing on human psychology (Carston 1988, 165).

Advocates of the minimal truth-evaluability principle have two possible responses to this. The first is to simply maintain that facts about what the hearer remembers and what propositions play an inferential role in her mental life are simply irrelevant to the question of what is said. This objection is one I will take up in more detail subsequently. The second response, however, is to maintain that the simple existential claim that there is some distance or other between the park and the speaker's house is not the minimal truth-evaluable proposition.

How should this response be spelt out? Each of (16a), (16b), and (17) can be analyzed as quantifications—(16b), for example, quantifies over distances. One view of natural language quantification is that in general quantifiers require a domain of quantification to be contextually provided. The supposition that the domain is context-dependent is seen to explain why sentences like (19) are not normally taken to convey that everybody in the world

went to Auckland, but just that everybody in a certain contextually relevant group (e.g. the postgraduate students in the department) went to Auckland.

(19) Everybody went to Auckland.

Now, the minimal truth-evaluable proposition expressed by (16b) will only be the one which quantifies over all distances if we think that the natural language quantifiers come with a default domain—namely, the domain of everything—which is only constrained by the explicit content of the rest of the utterance (e.g. by the requirement that it be a distance). However, it is just as plausible an account of the quantifiers to maintain that their linguistic meaning specifies only that there be some domain or other, and that this domain must be supplied by context *before* any proposition can be expressed. On this view, (16b) only expresses a proposition once the domain is supplied, and this domain may well be the set of distances too far to walk, or some other contextually appropriate set—in general, the set of distances worth mentioning in a given context.

This same approach to quantification can be applied to give the intuitively appropriate results for (16a), (16b), (17), and indeed (19) above. Unfortunately, it does not seem to be easily extensible to some other examples offered by Carston (1988, 165):

- (20) a. He ran to the edge of the cliff and jumped.
 b. I went to the exhibition and ran into John.
 c. She took the gun, walked into the garden and killed her mother.
 d. I had a holiday in Austria and did some cross-country skiing.

In most contexts of utterance (20a) will convey that the subject jumped off the cliff, (20b), that John and I met at the exhibition, (20c) that she killed her mother with the gun in the garden, and (20d) that I skied while in Austria. However, in these cases it seems implausible that there is some slot which must be filled for each sentence to express a proposition. Rather the proposition conveyed seems to be the result of what Recanati calls *free enrichment*, a process whereby the minimally truth-evaluable content connected to an utterance (the one that results from *saturation*, i.e. filling the contextually sensitive slots) is enriched to become a more informative proposition. If this proposition is what is said, then not only will the principle of minimal truth-evaluability will be false, but minimalism towards what is said will also have to be abandoned.

3.4 The independence principle

As noted above, however, the attempt to accommodate the intuition that what is said by (16b) in a given context is that there is some contextually significant distance between the

speaker's house and the park, or for that matter the intuition that in uttering of (20a) one will generally say that the subject jumped off the cliff, is not the only response the advocate of minimalism can make. It is possible for an advocate of minimalism to simply maintain that what is said is the minimal truth-evaluable proposition and that facts about what the audience retains from the conversation, or what does inferential work for them, are neither here nor there. To evaluate this response we need to consider Carston's view in more detail.

Carston begins her discussion with the observation that the undisputed cases of conversational implicature exhibit one important property in common—they do not overlap in propositional content with what is explicitly said by an utterance. Consider, for example, one of Grice's own examples:

- (21) A: Smith doesn't seem to have a girlfriend these days.
B: He's been paying a lot of visits to New York.

B's utterance uncontroversially implicates that Smith may have a girlfriend in New York, a claim which has truth conditions distinct from those of what B literally said. The same phenomena can be found in one of Carston's own examples:

- (22) A: Have you read Susan's book.
B: I don't read biographies,

which implicates both that Susan's book is a biography and that B hasn't read it. Both of these implications are independent of the explicit content of the utterance. The implicatures and the explicatures "occupy independent roles in the mental life of the hearer" and "function as autonomous premises in inferential interactions with other assumptions" (1988, 138). It is this feature of conversational implicatures, Carston suggests, which serves to distinguish them from pragmatically provided aspects of what is said. The *independence principle*, accordingly, says that

a putative implicature is actually part of what is said just in case its contextually determined content entails the minimally truth-evaluable content.

Carston's main evidence for the independence principle is the sentences grouped under (20):

- (20) a. He ran to the edge of the cliff and jumped.
b. I went to the exhibition and ran into John.
c. She took the gun, walked into the garden and killed her mother.
d. I had a holiday in Austria and did some cross-country skiing.

In each case, it seems that the richer proposition—the one we intuitively identify as what is said—entails the weaker one which the minimalist takes to be what is said. Since the richer proposition entails the weaker one, the independence principle will rule that it is what is literally said by the utterance. The problem with this is twofold—first, the principle seems largely ad hoc. While it seemingly gives results in accord with our intuitions, there seems to be no independent reason why it should be true. Secondly, as Carston herself recognizes, it seems to allow too much to be built into what is said. Consider again B's utterance from (21):

(21) B: He's been paying a lot of visits to New York.

Now, we take the claim that Smith may have a girlfriend in New York to be one of the conversational implicatures of B's statement. But Carston's independence principle would seem to license treating (20) as what is explicitly said by B:

(23) Smith's been paying a lot of visits to New York and he may have a girlfriend there.

After all, since (23) entails B's utterance in (21), it seems that it could play any cognitive role that (21B) plays in the mental life of either A or B. What prevents us from using the independence principle to justify treating all of the conversational implicatures of an utterance as part of the explicit content of what is said?

Carston's solution to this problem is to be found in Sperber and Wilson's relevance theory. One could, she notes, try to give an account of independence which allowed in the richer interpretations of the sentences in (20) but ruled out (23) (Carston 1988, 167-168), but she thinks that relevance theory provides a more satisfactory account for two reasons. First, it allows a general, rather than ad hoc, account of the upper bound to the independence principle, and secondly, it provides support for the independence principle itself, thus answering the first criticism noted above.

Relevance theory, as discussed above, cashes out Grice's maxim *be relevant* in terms of a notion of cognitive economy: the more cognitive effects an utterance has the more relevant it is, and the less processing power an utterance requires to be understood, the more relevant it is. What is wrong, on Carston's view, with treating (23) as the explicit content of B's utterance is that interpreting it as (23) wastes processing power. In order to retrieve (23) as the explicit content of B's words a hearer would have to go through the process of interpreting (21B) (i.e. reference assignment, etc.), followed by the process of arriving at the second conjunct ("he may have a girlfriend in New York") in his attempt to make the utterance sufficiently relevant, and *then* conjoin the two to produce (23). This last cognitive act will take additional effort, thus decreasing the relevance of the utterance, without adding to the

cognitive effects (in fact, the hearer may then have to perform an and-elimination process in order to achieve the full set of cognitive inferences possible, thus doubling the extra labour). These same principles of cognitive economy are what provide independent support for the independence principle. In the case of (20a), the interpretation on which John jumped off the cliff has all the cognitive effects of the minimal proposition (without requiring extra steps like and-elimination) and additional effects besides—it is thus of greater relevance, and the extra cognitive effort required to process it is justified. In general, where the enriched proposition has all the cognitive effects of the minimal proposition without requiring redundant processing steps (such as and-introduction and elimination), the richer proposition will be more relevant, and it is this fact which Carston takes to support the independence principle.

The first problem with the independence principle then is that its plausibility rests upon an acceptance of relevance theory. However, even if one accepts relevance theory the independence principle faces further difficulties. As we noted, the independence principle treats (17) uttered by me this morning as saying that I have had breakfast today because that proposition entails the minimal one expressed by (17).

(17) I have had breakfast.

However, as Recanati points out (Recanati 1989, 104), this same treatment cannot be applied to (24).

(24) I haven't had breakfast.

Uttered in the same circumstances as above, (24) is generally taken to say "I haven't had breakfast today." However, the independence principle doesn't support or explain this, as "I haven't had breakfast today" does not entail the minimal proposition expressed by (24)—namely, that I haven't had breakfast ever. Similarly, "Every postgraduate student went to Auckland" does not entail "Everybody in the world went to Auckland", and yet in some circumstance the former will seem to be the right reading of (19).

(19) Everybody went to Auckland.

Not all of the propositions which result from the process of free enrichment have all the cognitive effects of the minimal proposition plus some of their own—in cases like (19) and (24) the cognitive effects of the enriched and minimal propositions are disjoint. The independence principle treats the parallel cases of (17) and (24) differently and so does not accomplish the task of accounting for when the results of free enrichment contribute to what is said.

3.5 The availability principle

Given the failure of this attempt to accommodate the intuition that sometimes what is said goes beyond the minimal proposition expressed by an utterance we might be tempted to retain minimalism. However, Recanati (1989) argues that *even* if the minimal truth-evaluability principle is the right one, it cannot be used as a test (a working criterion) for whether a pragmatically determined aspect of meaning is part of what is said (part of the semantic content of the utterance) or an implicature.

The problem, as he sees it, is that the principle is a biconditional: it says that "a pragmatically determined aspect of meaning is part of what is said if and only if its determination is necessary for the utterance to express a complete proposition" (Recanati 1989, 105). This means that in order to use the principle to determine whether a particular pragmatically provided aspect of meaning is part of what is said one has to already know what is needed for an utterance to express a complete proposition. However, as the discussion of quantificational domains in the previous section suggests, there will often be two competing accounts of the linguistic form of the utterance, and thus of the slots which need to be filled in order for it to express a proposition, each of which goes with a particular view about what the semantic content of the utterance is. Both accounts will be compatible with minimalism, as what they disagree about is what the minimal proposition is. The minimal truth-evaluability principle is only useful if one already has a complete semantic analysis of the sentence uttered, but if one has that one doesn't need the principle.

Reflection on our actual processes, suggests Recanati, shows us that in general we start with some intuitions about what a sentence says in various contexts, and move from that to an account to one of what the sentence's linguistic meaning is. What is important to realize is that linguistic meaning is an abstract and theoretical entity, one to which we do not have direct access. What we do have direct access to is what is said by an utterance. Thus, Recanati disagrees substantially with Salmon, who suggests in the quotations above that at best what we have access to is what is conveyed by an utterance. Recanati would agree that we have access to what is conveyed (in his terminology, what is communicated), but he thinks it is a mistake to view what is conveyed as something above and beyond the conjunction of what is said and what is implied.

We can better understand this disagreement by considering the following diagrams (adapted from Recanati 1989):

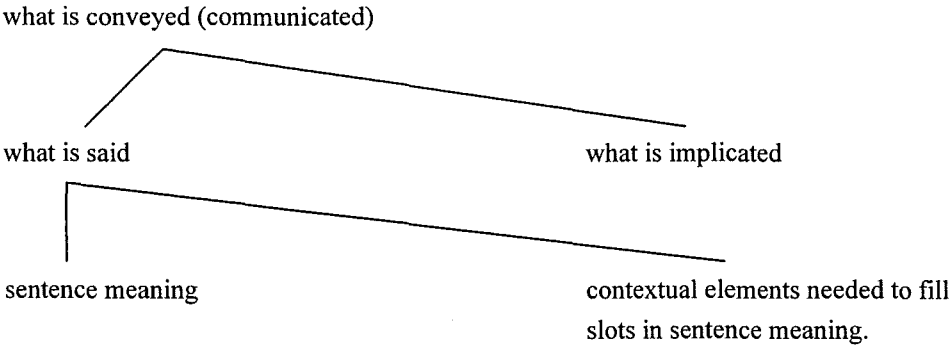


Figure 1

In figure 1, representing Salmon's view, what is conveyed is the result of a final level of cognitive processing. Now, there is in general no reason to think that anything other than the result of the final step of the process of understanding an utterance will be consciously accessible. Accordingly, knowledge of what is said could be just as tacit as knowledge of sentence meaning. Every level other than what is conveyed will be properly seen as sub-doxastic. In contrast, Recanati's view (represented in figure 2) sees what is conveyed as just another name for what is consciously accessible.

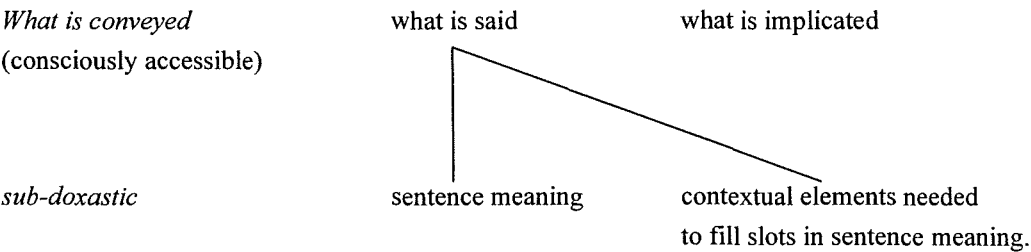


Figure 2

Since for Recanati what is said is consciously available to us, we can use that availability as a criteria for distinguishing implicatures from what is said:

Availability: in deciding whether a pragmatically supplied aspect of what is communicated is part of what is said we should always attempt to preserve our pre-theoretic intuitions on the matter.

This is, he notes, what we have been doing all along anyway when we considered the viability of the other proposed principles.

3.6 Theory and intuitions

Why should we accept the availability principle? After all, isn't the distinction between semantically encoded and pragmatically imparted information something about

which, as Salmon and Soames suggest, there is widespread ignorance? Isn't it after all a technical theory, which shouldn't be held to the requirement that it match our intuitions on the matter? If we held physics to such a standard, one imagines the respondent saying, we never would have gotten this far in understanding the universe.

There is of course a theoretical account under discussion here—the one which distinguishes between elements of what are said that are provided by the linguistic meaning and those provided pragmatically. And this account certainly should not be held hostage to our intuitions, as these regularly conflate the linguistic meaning of a sentence with the meanings of particular utterances. However, the distinction between what is said and what is implied *is* an ordinary distinction, one which Grice attempted to elucidate. As such, the theory explaining the difference between them is in part a theory explaining those very intuitions. We may go beyond our intuitions, Recanati notes (1989, 115), when we demonstrate that pragmatic processes similar to those which produce implicatures contribute to what is said. Nevertheless, we should not lose sight of those intuitions, he suggests, as this is:

a very special field: in this field, our intuitions are not just a first shot at a theory—something like Wittgenstein's ladder, which may be thrown away after it has been climbed up—but also *part of what the theory is about*, and as such they cannot be neglected (Recanati 1989, 115, italics in original).

The peculiarity of the Salmon and Soames view, on this picture, would stem in part from the fact that an account of the semantic content of names is supposed to be an explanation of our use of names and intuitions about them, and yet it makes our actual use seem mysterious and, bizarrely, incorrect.

As it stands however, very little has been said in favour of the availability principle. Certainly, on the model of linguistic processing Recanati offers it looks plausible, but why should his model be preferred to that in figure 1? Similarly, we may accept that we need to explain our intuitive distinction between what is said and what is implied, but think that we can do so without identifying the ordinary notion of what is said with the semantic content of an utterance. We might explain it, for example, in terms of a distinction between two classes of merely implied (in our technical sense) information, one of which is combined with the semantic content of an utterance and identified with what is said, and one of which is identified with what is implied. On this account, our ordinary notion of what is said might be seen as an attempt to distinguish between semantic content (i.e., what is truth evaluable) and the merely implied, but one which misfired because of confusion of truth and assertibility. Indeed this version of the defense of the naïve view might be what Crimmins had in mind when he wrote:

it is not always transparent to us as competent language users whether our intuitions of incorrectness are really intuitions about truth or about propriety (Crimmins 1992, 4)

Can anything be said about why the availability principle, and the hypothesis about linguistic processing that goes with it, should be preferred to its alternatives?

3.7 Is the availability hypothesis defensible?

One advantage of the availability hypothesis is that views guided by it will in general not be put in the position of saying that we are wrong about our own language. There is something very peculiar about saying that we collectively use our language wrong, though it is hard to explain just what this peculiarity amounts to. Also, there seems to be very little point to saying that we are mistaken in our use of language—those to whom the mistake is pointed out are not going to change their use of such locutions. Indeed, they will continue to misuse them—but now they will do so deliberately.

Perhaps more significantly, it seems that even Salmon and Soames must accept some limited version of the availability hypothesis. After all, the account they wish to defend depends on taking some uses of names and our judgements about what is said with them as reflecting the right account of their semantic content. Further, it is hard to see how we could go about natural language semantics in any other way. How else might we identify the meanings and truth conditions of sentences other than by considering our intuitions about various possible cases?

Some more substantial evidence in favour of the availability hypothesis can be found in the fact that we ordinarily find it relatively easy to explain the origins of conversational implicatures. In the Susan case, for example, one does not need a course in Gricean pragmatics or relevance theory in order to say quite a bit about what the implicatures are and how they relate to the uttered sentence.

(22) A: Have you read Susan's book.

B: I don't read biographies,

These ease of accessibility of traditional conversational implicatures is quite mysterious to someone who subscribes to the model of figure 1, as they are not supposed to be consciously accessible. In contrast, Recanati's model makes their accessibility perfectly explicable. In suggesting that some cases are teaching cases, Saul was attempting to account for this phenomena, but this is not an adequate account. Why should any of the information about conversational implicatures be consciously available on the model of figure 1? In so far as the advocate of a figure 1 model allows that some information about what is said and what is implied is consciously available, they will be hard pressed to explain why only some is, and

may be forced back to Recanati's view. Thus, it seems that the availability view has the further advantage of not positing an ad hoc distinction between the accessible conversational implicatures and the inaccessible ones. It seems on balance that the availability view has the advantage and that in the absence of a compelling argument against, or a defense of any of the competing theories against the criticisms leveled against them, we should accept it.

4. *The pragmatics/semantics distinction*

In defending the naïve view Salmon and Soames emphasize the plausible claim that competent speakers of English and other natural languages may well be insensitive to the difference between pragmatically provided information and semantically provided information. However the success of this strategy in defending the naïve view's claim that what is literally said by (1) and (2) or (3) and (4) is the same depends upon the identification of pragmatically provided information with what is merely implied by an utterance.

- (1) Clark Kent went into the phone booth and Superman came out.
- (2) Superman went into the phone booth and Superman came out.
- (3) Lois believes that Superman can fly.
- (4) Lois believes that Clark Kent can fly.

Consideration of this aspect of the naïve view in light of actual theories about pragmatically conveyed information quickly shows that this identification will not do. Since aspects of what is said by an utterance are provided pragmatically, the identification of semantic content with what is semantically encoded (that is, the linguistic meaning) must be given up. We have two distinctions: that between what is said (semantic content) and what is implied; and that between the linguistic meaning and pragmatically provided information. On this account, even if we suppose that our intuitions about the various puzzle cases can be explained in terms of pragmatically imparted information, this is not sufficient to justify the naïve view's judgement that the intuitions do not concern what is literally said by the utterances in question.

We need further reasons to think that the pragmatically imparted information posited by the naïve theory is not part of what is said. However, since our best candidate for a principled way to make such a decision is the availability principle, the strength of people's intuitions does provide good reason for thinking that the pairs differ in semantic content. In short, pragmatic theories do not provide the explanation that the naïve theory needs to make it plausible.

This conclusion leaves us at an impasse. The naïve theory appeared to have the best chance of giving an account that accommodated and explained all the puzzles of chapter

three. Now that its theoretical foundation has been undermined we must find some other way to account for what is said by the various utterances. It is to this task that I now turn.

CHAPTER 7

The new no-theory theory

In this chapter I argue that the right conclusion to draw from the considerations of the earlier chapters is that no account of the semantic content of proper names can be given. I say more about what this means below, but the essence of the claim is that there can be no account of the relationship between the linguistic meaning of names or the referents of names and the context of the utterance that will provide what is needed for a compositional meaning theory for a natural language like English. In short, there can be no such theory.

This description and the title of this chapter no doubt bring to mind the position put forward by Stephen Schiffer in *Remnants of Meaning* (Schiffer 1987). The resemblance is not accidental. However, there are important differences between his position and the one this chapter defends. Since the central claim made by *Remnants of Meaning* is that there is no correct compositional theory of meaning for natural languages like English, I should say a little more about the relationship between this argument and mine. The central problem for Schiffer is giving an account of the meaning of the predicate 'believes'. He maintains that the only account of this predicate compatible with a compositional semantics for English is to treat it as a relation. The majority of *Remnants of Meaning* is devoted to arguing that there are no appropriate objects for 'believes' to be a relation to and that there are no properties (in the ontologically significant sense) that correspond to predicates of the form 'believes that ϕ ', though of course there are physical states that realize a particular belief that ϕ (Schiffer 1987, chapter 6). The further suggestion made by Schiffer is that his arguments could be extended to show that there are a number of predicates in English to which no non-pleonastic properties correspond (Schiffer 1987, 71).

On Schiffer's view the predicate 'believes' has no meaning which can be expressed in non-intentional language and no referent at all—there is no such relation. The analogous position for proper names would be to claim that there are no individuals corresponding to any of the names of a language like English. Such a view seems manifestly absurd. It is not

my view. There is a perfectly good sense in which the planet Venus corresponds to 'Hesperus' and 'Phosphorus', the individual Marilyn/Norma Jean corresponds to 'Marilyn Monroe' and 'Norma Jean Baker' and the city Leningrad/St. Petersburg corresponds to 'Leningrad' and 'St. Petersburg'. One perfectly good name for this correspondence is 'reference'. In particular, the truth conditions of sentences containing these proper names are bound up with the various physical states of their referents.

Finally, it is not part of the view defended here that there are no meanings. As is made clear in what follows the problem with proper names is that in some utterances we cannot specify their contribution to semantic content in any independent way—the only thing that unifies the circumstances in which those utterances are true is that they are circumstances in which those utterances are true. However, the fact that there is no property that all these circumstances share is no more a reason to think that the utterance is meaningless than, as Wittgenstein showed, is the fact that there is no property that all games share a reason to think that the word 'game' is meaningless.

The problem, as I see it, is that there is no straightforward relationship between the linguistic meaning of a proper name (or its referent), the context of utterance, and the contribution of that name to the semantic content of utterance. As a consequence, we cannot specify a unitary semantic unit—even a context sensitive one—which can serve as a building block in a compositional semantics. Thus there cannot be a finite and complete compositional semantics for natural languages like English.

In the rest of the chapter I proceed as follows. First I return to the examples of chapter four and draw out some of the consequences of the need to accommodate them at some level of our analysis of language. Secondly, I argue that there can be no treatment of proper names that provides the right semantic content in all contexts. I discuss the hitherto suppressed problem of empty names and note that similar considerations apply to other singular terms such as pronouns and demonstratives. I then show that this means that there can be no compositional meaning theory. Third, I discuss the arguments in favour of compositionally and conclude, with Schiffer, that they are largely unconvincing. I then take one final look at the claim that the naïve view is to be preferred to the no-theory account. Finally I argue that the claim that there is no substantive theory of the meaning of singular terms is not tantamount to giving up on the projects of the philosophy of language.

1. *What do the simple sentences show?*

Traditionally the problems caused by co-referential names in propositional attitude contexts have promoted the view that the problems of co-reference are problems of ignorance of co-reference. What the simple sentences illustrate, however, is that sometimes it is the knowledge of co-reference that feeds the puzzles. Bringing the fact of co-reference, and the circumstances surrounding it, to the audience's attention allows the speaker to use the names in another way. Consider, for example, the following comment.

St. Petersburg, known throughout the period of communist rule as Leningrad, is a changed city. Where Leningrad was a city of repressed religious sentiment, covered with the shadow of official atheism, St. Petersburg is alive with expressions of faith.

The reader of this is under no doubt that while in the first sentence 'St. Petersburg' picks out the city throughout the 20th century (at least), the sense of the second sentence depends on the name referring to the post-communist temporal slice. What our attention should be called to however, is that this shift is accomplished by drawing the fact of co-reference to the readers attention, not by the ignorance of any party.

This is one important limitation on any theory of proper names, as the existence of two proper names with the same reference, together with facts about the non-linguistic conventions which are the origins of the names, can make it pragmatically possible to use the names in previously unanticipated ways. Similar considerations apply to various characteristic or stereotypical properties associated with the bearers of proper names. It is easy to see how knowledge about a very well known person could be exploited in the use of the proper names with which they are associated. It is this that is going on in utterances like (1) (the second use of the name would no doubt be said with a slightly different emphasis).

(1) Nixon didn't have to become Nixon.

Nor are these sorts of utterances confined to names associated with public figures. I may well say to you, when you inquire about my dinner with our mutual friend Arthur, that he was very Arthur last night. My utterance depends on knowledge of Arthur, but it only need be shared among us. Bezuidenhout offers a similar example in which you and I share the belief that Jane is a timid, wimpy sort of person, and you are telling me a story in which she allows someone

to take advantage of her. If I ask why she didn't do anything to prevent this from happening, you might well reply with an utterance of (2).

(2) Oh, you know, Jane is just Jane.

What is interesting about this particular example is that our shared belief in Jane's wimpyness is utterly inessential. Even if I have never met Jane and have no beliefs at all about her character, an utterance of (2) in response to my query will still say that Jane is the sort of wimpy, timid person who allows people to take advantage of her. Similar examples arise in cases without identity, as in (3).

(3) The U.S. Constitution gives Clinton the power to appoint Supreme Court justices.¹

When a reporter utters (3) he is not claiming that the Constitution names Clinton, or that the authors of the Constitution had Clinton in mind. Instead, (3) is true just in case whoever is *the president* has the power to appoint Supreme Court justices. The phenomena also arises for pronouns, as can be seen in (4) and (5).

(4) You are entering Calgary.

(5) We traditionally have a break before questions.²

When (4) is written on a road sign just outside Calgary it says something like: the appropriately positioned reader of this sign is entering Calgary, and an utterance of (5) by the chair of a seminar series does not refer to the group currently present but means something like: there is a tradition that there is a break between the speaker's talk and the question period. While (1)-(5) do not involve any anti-substitution intuitions, their semantic content, like that of examples from chapter four, cannot be captured by the singular or quasi-singular propositions that the competing contemporary views associate with them.

¹ This example is an adaptation of one found in Nunberg (1993, 21) and discussed in Bezuidenhout (1997, 384).

² These examples are adapted from those in Bezuidenhout (1997, 384-385).

1.1 Is this just the referential/attributive distinction at work?

One possibility that consideration of examples like (1)-(5) might bring to mind is that the distinction between referential and attributive uses applies to singular terms as well as definite and indefinite descriptions. This is the position taken on examples involving indexicals and demonstratives by Anne Bezuidenhout (1997). She argues that pronouns, descriptions (both indefinite and definite), and demonstratives are best seen as being *semantically underdetermined*. In order for sentences in which they occur to be interpreted pragmatic processes must be brought to bear on the utterance (Bezuidenhout 1997, 385). It is these processes which determine whether the proposition expressed is general or object-dependent, and also what the content of the attributive uses is. Could we accommodate the problems with proper names by positing both referential and attributive uses?

Unfortunately the distinction between referential and attributive uses will not accommodate all of the problematic cases. Consider Lydia's utterance of (6).

(6) No ancient astronomers believed that Hesperus is Phosphorus.

The difficulty of arriving at an account of the truth-conditions (or pragmatic implications) of (6) was precisely that there are no particular descriptions which putative counterexamples to (6) need to think apply to Venus, but not just any two descriptions will do. Even if we allow that the names in (6) are being used attributively, we will encounter the same difficulty as before if we attempt to determine what the content of that attribution is. Similar problems arise for the simple sentences. It was precisely because there is no description available that will allow for the right truth conditions in cases like (7) that Forbes and Moore were forced to resort to the notions of persona and aspects which serve as the referent of the name in these cases.

(7) Clark went to the fancy-dress party as Superman.

The difficulty might be expressed by saying that the propositions expressed by (7) and (6) would seem to be object-dependent, except that there is no appropriate object.

1.2 Linguistic and non-linguistic information

While the distinction between referential and attributive uses does not provide and account of all our problem cases, Bezuidenhout's observation that the linguistic meaning of pronouns, descriptions and demonstratives underdetermines their semantic content seems correct. The right moral to draw from the similarity between our problem cases and sentences like (3) is twofold—first, proper names are also semantically underdetermined, and second, non-linguistic information is an essential ingredient in an understanding of what is said by utterances of such sentences.

(3) The U.S. constitution gives Clinton the power to appoint Supreme Court justices.

While (3) can be understood as an attributive use in which the name is going proxy for the property of being the president, in order to correctly understand what is said by the reporter's utterance of (3) the audience must have substantial non-linguistic information. In particular, the audience must be in a position to know that the constitution is not the sort of document which would bestow powers on Clinton in particular, that Clinton is the president, and so on. Someone without the requisite information is simply not in a position to understand the reporter's utterance.

Similar considerations apply to (6). Neither Lydia nor her audience know what sorts of ways of thinking about Venus there are. But they do know that there are multiple ways to think of Venus such that it is not obvious that they are modes of presentation of the same thing. Furthermore, they know that the discovery of the identity is an astronomical discovery—or more generally, a scientific discovery. The ability to recognize a scientific discovery (though not criteria for being one), is part of the knowledge that allows us (and Lydia) to recognize the seasonal-cycle astronomer as a counterexample.

This emphasis on the role of extra-linguistic information also helps to make sense of puzzles like Kripke's Paderewski (Kripke 1979). Peter hears Paderewski play the piano, and enjoys it very much. On account of this it seems that (8) is true.

(8) Peter believes that Paderewski has musical talent.

Nevertheless, when Peter later learns about Polish politics, his general belief that the pursuit of politics is incompatible with musical excellence seems to make (9) also true.

(9) Peter disbelieves that Paderewski has musical talent.

The puzzle is how to explain this without making Peter guilty of poor logic, for his difficulty (if there is one) is ignorance of Paderewski's multiple roles rather than logical ineptitude. One is tempted to think, as Kent Bach suggests, that neither (8) or (9) fully specify Peter's belief—Peter believes that Paderewski the pianist had musical talent, but disbelieves that Paderewski the statesman had musical talent (Bach 1998). Bach's concern is that this will not be enough to specify the belief either—we can imagine that Peter has heard two recordings by Paderewski, one beautiful classical piece and one horrible jazz improvisation, and takes them to be by two pianists. Then we must say that Peter believes that Paderewski the classical pianist has musical talent, but disbelieves that Paderewski the jazz pianist has musical talent—and so on. As Bach puts it, it seems like "we can always say more, but ... can never say enough" (Bach 1998, section 3). When all the information we have is that Peter has heard Paderewski play we are able to treat (8) as expressing something determinate (and true). In light of further information, (8) no longer seems to have the same truth-value because it no longer seems to say the same thing—indeed, it becomes ambiguous, and the clarifying phrase is needed to fix the content of the attribution.

Of course to comment on the role of non-linguistic information in understanding these utterances is not to explain what the semantic content of the name is in each case. Bach's observation—that we can never specify the content, but only characterize it—applies just as much to the case of Lydia and the astronomers and to the simple sentences. The reason we had so much trouble accounting for what appearances of the individual Clark/Superman count as 'Superman' appearances is that we can only characterize those appearances. That is, it is always possible to imagine a new counterexample, or to add an extra piece of information to the context.

2. The semantic content of names

The contemporary views differ widely on what the semantic content of a proper name is. On the neo-Russellian views both the semantic content and the linguistic meaning of proper names are exhausted by their referent. The naïve theory and hidden-indexical accounts

differ over the linguistic meaning of the propositional attitude predicates. On their view linguistic competency requires knowing that for any simple sentence containing a proper name the proposition expressed is singular, and the contribution of the name is its referent.³ On the neo-Fregean account the linguistic meaning of a proper name can usefully be regarded as its referent, but its semantic content will always be a *de re* sense. On Recanati's indexical view the linguistic meaning of a proper name NN is composed of the description 'the thing called NN' and the stipulation that the truth conditions of the utterance are singular, and the semantic content is divided into the truth-conditional content—which is the referent of NN—and the *de re* sense which enters into the proposition expressed by the utterance.

This plethora of views resulted from the desire to accommodate two phenomena: (a) the behaviour of names in modal contexts; and (b) the opacity of propositional attitude contexts. As we have seen, none of the views easily extend to accommodate the wide variety of roles that proper names actually play. Nor does some third candidate other than the referent or a *de re* sense of the referent come easily to hand as an alternative. Consideration of the difficulties encountered by Forbes and Moore in accounting for the behaviour of Saul's simple sentences suggests that the kind of semantic content contributed by proper names varies from context to context and that sometimes it will be difficult, if not impossible, to specify what this content is in terms that are free from the use of the particular name in question. This later phenomena seems to arise when the content is not an individual or a property but is connected with features of our non-linguistic practices (e.g., our collective disposition to apply a name; our collective disposition to describe something as an scientific discovery).

2.1 Index and content

One aspect of the right way to accommodate this range of uses is to treat the referent of a proper name not as the semantic content but as an *index* for the semantic content of the name. Suppose that two child care workers are discussing the occupations of the mothers of their children they care for. One of them points to one of the children in the class and utters (10).

³ Mastery of all proper names is not required for linguistic competence, so the competent speaker may not know what the referent is. That is, while the practice of naming is a linguistic phenomena, the fact that there is a practice of using 'Nicole' as a name for me is a non-linguistic fact.

(10) She's a banker.⁴

Interpretation of (10) requires the audience to identify of the child, who is the index of the pronoun 'she' and then identify the child's mother, who is the referent.⁵ Similarly, interpretation of an utterance using the pronoun 'we' requires that the audience identify the speaker—who is the index—and then on that basis the group which is the referent of the pronoun.

In the case of the first person pronoun the referent and the index usually coincide, but Bezuidenhout has noted that once we have the distinction between the index and the referent of the pronoun in hand we can easily interpret otherwise problematic utterances (Bezuidenhout 1997, 403). Imagine that Clinton utters (11) at a press conference.

(11) The U.S. constitution gives me the power to appoint Supreme Court justices.

The semantic content of (11) is not any different from that of (3) when uttered by our reporter.

(3) The U.S. constitution gives Clinton the power to appoint Supreme Court justices.

In each case, the contribution of 'me' and 'Clinton' to the semantic content of their respective sentences is roughly that of 'the president, whomever he is'. In the case of (11) Bezuidenhout takes Bill Clinton to be the index of 'me' and the property of being the president to be the semantic content of 'me'. It seems natural to say that exactly the same phenomena is occurring in (3)—that 'Clinton' has both an index, which is Clinton himself, and semantic content, which is the property of being the president.

If the referent of a proper name serves as the index, what is the relationship between the referent and the semantic content in a given context of utterance? In some cases the referent itself—or if you prefer a *de re* sense of it—will be the semantic content of the utterance. In cases like (3) and perhaps some cases of attitude attribution the semantic content will be a property or set of properties possessed by the referent, so that the name is being used

⁴ This example is from Bezuidenhout 1997, 401.

⁵ The index is required even though we assume that the mother is known to the child care workers and that the proposition being expressed is an object-dependent one concerning the mother rather than the proposition expressed by: that child's mother is a banker.

attributively. However, in many cases the relationship and the semantic content itself will be much more complicated.

2.2 Unspecifiable content

What is common to the simple sentences and the case of Lydia and the astronomers is that even when we allow that the semantic content of the name (or the content traceable to the use of the name) is more than just its referent it is very difficult to specify what the additional content is. In Lydia's case the possibilities of ignorance and idiosyncrasy frustrated attempts to specify it in terms of either her intentions or her dispositions. In the case of utterances such as (12) we faced related difficulties.

(12) Superman is more successful with women than Clark Kent.

In order to give the right truth conditions we found ourselves forced to posit the existence of aspects of the individual Clark/Superman that were more than just ways of thinking of an individual, since they must be able to walk, be successful with women, etc. Putting aside whatever metaphysical worries we might have, the biggest problem with the proposals exploiting this device was that they can only accommodate the use of sentences like (12) by the enlightened utterer. Those not in the know are, because of their ignorance, unable to form the requisite intentions. Jennifer Saul has pointed out the peculiarity of an account on which "the people most likely to utter [(12)], the unenlightened, are the ones who cannot utter it truthfully" (Saul 1999c, 108). Even more problematically, advocates of this sort of view are forced to explain our intuition that (12) and (12*) say something different in unenlightened contexts in terms of pragmatic features (if at all) while simultaneously defending the view that the same intuition about enlightened contexts must be treated at the level of semantics.

(12*) Superman is more successful with women than Superman.

Just as in the case of Lydia, it is partly the ignorance of the unenlightened utterer of (12) that seems to prevent us from ascribing the right content. There is in these cases however the additional problem of specifying what that content is. There seems to be nothing that unifies 'Superman' appearances of Clark/Superman than our inclination to use 'Superman' in connection with them—but we all agree on which are the 'Superman' cases.

The right thing to say about these cases seems to be that sometimes our practice of using a particular proper name may not reflect any genuine properties. There may be no way to specify the content of the name without using the name itself because there is no content—only the practice of using the name in this way. Of course we can go some way to explaining our use of particular names by explaining about the double life of the individual or the noncontiguous appearances of the object or the political origins of the names of the city. However telling this story does not serve to give the content of the name, though it may well allow someone become competent with the name. Similarly, understanding that there are two names for Venus and that the discovery that they named the same planet was an astronomical one is enough to enable Lydia to utter (6) and communicate that the seasonal-cycle astronomer would be a counterexample, but it is not enough to allow us to specify the content of her uses of the proper names.

(6) No ancient astronomers believed that Hesperus is Phosphorus.

The ability to use a proper name correctly seems to come with the ability to say how it would be used if some hitherto unknown identity came to light. Suppose that the philosopher Saul Kripke turned out to having been living an alternate life under an elaborate disguise as the philosopher David Lewis. In the long run the use of the two names might die off.⁶ In the short term however, none of us would have difficulty in distinguishing Lewis appearances from Kripke appearances. Nor would we give up our judgement that an article containing (13) and (14) was accurate, though we might wonder what the *individual* Lewis/Kripke actually thought.

(13) Lewis advocates modal realism.

(14) Kripke does not advocate modal realism.

In the case of the Superman/Clark Kent examples, it is Lois's mastery of the names—and thus her ability, upon being enlightened, to continue to use the names in distinct ways and in accord with our enlightened use—that allows us to understand her utterance of (12) and her to understand our utterance of (12).

⁶ I suspect it wouldn't. The use of both names would continue to be useful precisely because it would enable us to say things like (13) and (14), the expression of which would otherwise become laborious.

In short, language users are possessed of all sorts of extra-linguistic abilities and knowledge that allow them to identify what is said by a particular utterance and what is meant by a particular use of a name. In each case, what is said and what is meant will be highly context sensitive. The same sentence can say different things as a result of small changes in the context of utterance. One result of this is that unless an example includes, *per impossibile*, a full specification of the context, there is always the possibility that the addition of more information will result in a changed intuition about the truth value of a particular utterance. The problem posed by the Paderewski case—that we can always say more—is a result of this. The problem is not so much that we cannot specify what belief is ascribed to Peter in any given case, but that we can always imagine slight modifications to the context. These changes in context result in the utterance having slightly different semantic content. It is only if we assume that what is said by an utterance of (8) is not context sensitive (or not this context sensitive) that the Paderewski case is puzzling.

(8) Peter believes that Paderewski has musical talent.

In some cases there will be no semantic content as we normally understand it, though it will be possible to say what kinds of ways the world could be would make it true and what kinds would make it false. One way to describe the situation would be to say that the truth making circumstances share a family resemblance rather than a particular property or set of properties. The content of the utterance is this family resemblance rather than a description of necessary and sufficient conditions.

2.3 Singular terms

In chapter four I discussed a number of cases (due to Bezuidenhout) of utterances involving demonstratives where anti-substitution intuitions parallel to those involving names arise. Indexicals like pronouns and demonstratives also exhibit the same sorts of 'attributive' uses as can be found in proper names, as is illustrated by the parallelism of (3) and (11) (Bezuidenhout 1997; Nunberg 1992).

(3) The U.S. constitution gives Clinton the power to appoint Supreme Court justices.

(11) The U.S. constitution gives me the power to appoint Supreme Court justices.

We can also find cases like the 'Jane is just Jane' case, as when we utter (13), and perhaps also (14).

(13) She is who she is.

(14) She isn't herself.⁷

This parallelism suggests that other singular terms exhibit precisely the same behaviour as proper names. There is a temptation to regard the relationship between an indexical and the content of a particular use as a function from context to content. This view is encouraged by focus on the first person singular pronoun as a model for all indexicals. The actual state of affairs is that the move from the linguistic meaning of the indexical to the referent is a highly pragmatic affair which depends upon the possession of non-linguistic information.

This can be seen by considering an example of use of the first person plural drawn from a biology text.

(15) *We* do not know much about this part of the brain, which plays such an important part in *our* lives, but *we* will see in the next chapter⁸

In each case the pronoun picks out a group of which the speaker is a part, but in each case a different group—the scientific community, humanity in general, and the reader and writer. Knowing which group is relevant to which token of the first person plural requires knowing who are the primary producers of knowledge about the brain, whose lives the brain plays an important role in, that members of the academic community often adopt a 'tour-guide' convention for text books, and that the speaker—the index—is a member of these groups.

Once the role of non-linguistic information in determining the semantic content of both names and indexical is acknowledged, it seems clear that Bezuidenhout's puzzles about demonstratives are genuinely analogous to the simple sentence puzzles involving names. In each case we may have difficulty specifying the semantic content of either the singular term

⁷ It's not entirely clear what view we should have about the pronouns 'herself', 'itself' and 'himself', as they are often used for emphasis rather than as singular terms, as in 'The Pope himself visited her'.

⁸ This example is taken from Nunberg 1993, who reports having taken it from a biology text but does not cite the source.

or the utterance as a whole, but we can nevertheless recognize the situations in which the utterance is true.

2.4 Fictional contexts

The ability to provide an account of apparent reference to non-existents, particularly that of fictional names, is sometimes regarded as a litmus test for any account of the semantics of proper names (e.g., Proudfoot 1998). However it is important to note that there are not one but three discrete problems connected with ordinary talk about fictions. The first problem is to explain why it is that sentences like (16) are not, given the absence of a referent for 'Emma Woodhouse', meaningless.

(16) Emma Woodhouse was a bad matchmaker.

Call this the semantic problem. Solutions to this problem are further constrained by the need to account for negative existential statements like (17).

(17) Emma Woodhouse doesn't exist.

The second problem is to explain why it is that, given they are not meaningless, (18) seems false but (19) seems to be indeterminate.

(18) Mr. Knightley had three heads.

(19) Mr. Knightley wore a hat on the day Emma was born.

After all, neither issue is directly addressed in Jane Austen's *Emma*. Call this the content problem. The third problem is to explain our reference to the entities of literary criticism in sentences like (20) and (21).

(20) Emma is Jane Austen's most interesting character.

(21) Emma is the most realistic of Austen's female characters.

Call this the criticism problem.

Of course these three problems are related to one another, and some proposed solutions give the answer to more than one. For example, one might maintain that utterances like (16) are implicitly prefixed with a conditional, so that something like (16a) represents the true logical form of (16).

(16a) If *Emma* was a true record of events then Emma Woodhouse would have been a bad matchmaker.

This sort of solution is easily generalized to accommodate (20), which would thus have a logical form somewhat like (20a).⁹

(20a) If all of Jane Austen's novels had been true records of events, Emma would have been the most interesting person described by those histories.

However, while this sort of solution also provides a paraphrase of (19), it does not explain why it seems to have an indeterminate truth value—after all, if *Emma* was a true record of events then Knightley would have to have either worn a hat or not on the day in question. Similarly, an account which explains an utterance like (21) by positing the existence of abstract entities—namely fictional characters—will still need to say more about sentences like (16), (17), (18) and (19).

It is surely not a requirement of a semantic theory of names that it give a full and complete answer to all of these problems. What is required of a theory of proper names is twofold. First, it must accommodate whatever are the correct solutions to the content and criticism problems. That is, it must allow the proper names in (18), (19), (20) and (21) to have whatever content the correct accounts of truth in fiction and ontological commitment in literary criticism require. Secondly, it must provide an answer to the semantic problem. However, this answer must itself be somewhat schematic, as the content of sentences like (16) will themselves be constrained by the correct answer to the content problem. My strategy in the rest of this section is to show that the no-theory account of proper names provides an approach to the semantic content of names that is compatible with various popular approaches

⁹ I am not suggesting that this provides an adequate account of all of the sorts of claims made by literary critics—indeed, I do not think that this particular approach to the problems can get off the ground. The point is merely that the problems, while closely related, are not just aspects of the same problem.

to the problems of content and criticism. The discussion makes clear that the strategies used are perfectly general, and thus that the no-theory account will be compatible with whatever turns out to be the correct treatment of these issues.

2.4.1 Creatures of fiction

Peter van Inwagen has argued that literary criticism—in particular sentences like (21)—commits us to the existence of abstract entities (van Inwagen 1977; 1983). These entities, which include characters in novels, plots, sub-plots, novels (but not copies of novels), episodes, digressions, and the like, are the theoretical entities of literary criticism. That is, we are in van Inwagen's view committed to the existence of these entities if we endorse any literary criticism as literally correct, just as an endorsement of contemporary physics as (by and large) correct commits us to the existence of various theoretical entities of physics (quarks, black holes, and the like).

Among the theoretical commitments of literary criticism are what van Inwagen dubs *creatures of fiction*: which include characters in novels, fictional places, and entities like the Lady of Shalott and Moriarty's book *The Dynamics of an Asteroid*. These entities are abstract, but they genuinely exist. It is this sort of entity that is referred to by 'Emma' in sentences like (20) and (21).

(20) Emma is Jane Austen's most interesting character.

(21) Emma is the most realistic of Austen's female characters.

'Emma', and other fictional names are special not because they do not name anything, but because they name abstract entities.

This solution to the criticism problem does raise a problem for utterances like (16) (18) and (19), since if 'Emma' and 'Mr Knightley' are the names of theoretical entities of literary criticism they must all be false. Such entities do not make matches (well or badly), have heads (of any number) or wear hats (at any time). van Inwagen suggests that we solve this problem by positing that while creatures of fiction do not *have* the properties ascribed to them in such utterances, they do bear another relation to those properties—that of *holding*. A creature of fiction holds a certain property ϕ just in case ϕ is ascribed to that creature in a work of fiction or any part of a work of fiction (van Inwagen 1977, 305-306). Utterances of (16), (18) and (19) are false if they are taken to claim that the characters in question have or

exemplify the properties in question, but they may be true if we read them as merely claiming that a character *holds* certain properties. One important feature of relation of holding is that it is possible to hold incompatible properties or to fail to hold both a property ϕ and its negation, which allows van Inwagen to explain the apparent indeterminacy of (19).

This by itself is not a complete solution to the content problem, since it cannot account for the apparent truth of (22)

(22) Mr. Knightley had one head.

Jane Austen simply never saw fit to mention how many heads Knightley had.¹⁰ However, whatever its flaws it is clear that the no-theory theory can accommodate the view that fictional names refer to creatures of fiction, since on this view they are simply another kind of entity which can be named. Moreover, those who endorse van Inwagen's solution to the criticism problem but reject his approach to the content problem will also find support from the no-theory theory, since they may maintain that in (20) and (21) 'Emma' is used to name the character without being committed to the claim that the name serves the same function in (16).

2.4.2 Make-believe

One account of truth in fiction that is particularly popular among those eager to reduce our ontological commitments is that developed by Kendall Walton (1978). Walton distinguishes between two kinds of fictional truths—those that we will call stipulated truths, and those that we will call generated truths.¹¹ Consider a simple fiction—a child's mud pie game. In such a game it is stipulated as part of the make-believe that globs of mud are pies, and that a certain orange crate is an oven. Given these stipulations there are principles linking the actual properties of globs of mud to the make-believe properties of pies. Accordingly, actual facts—e.g., that the glob of mud has been in the orange crate for twenty minutes—will

¹⁰ van Inwagen claims that ascription must be taken as a primitive relation because of various difficulties which arise when we attempt to give an account of it (van Inwagen 1977, 306-307). Perhaps given this he would maintain that the absence of any sentence mentioning the number of heads Knightley had does not mean that *Emma* does not ascribe the property of having one head to him.

¹¹ Walton describes the first as what we imagine and the second as consequences of principles covering the fiction in question (Walton 1978, 10-11).

generate make-believe truths—e.g., *the pie has been in the oven for twenty minutes* (Here I use Walton's device of writing 'P is make-believe true' as *P*). As Gareth Evans points out, this make-believe truth may then generate further make-believe truths through its interaction with true counterfactuals (Evans 1982, 354-355). Thus, given that it is true that if this object was a pie and that one an oven and the first had been in the second for twenty minutes then the first object would be burnt, it follows that *the pie in question is burnt*.

Walton's idea is that this approach to the make-believe game can be extended to cover all cases of fiction. Thus what makes (16) true, (18) false, and (19) indeterminate is on his view the combination of the stipulated truths and generating principles for realistic novels.

(16) Emma Woodhouse was a bad matchmaker.

(18) Mr. Knightley had three heads.

(19) Mr. Knightley wore a hat on the day Emma was born.

In order to properly evaluate this view as a solution to the problem of content we would have to attempt to actually spell out these principles and see if they could provide the correct division of statements into the fictionally true, the fictionally false, and the fictionally indeterminate. However given our purpose this sketch of the view is adequate.

Evans used Walton's approach to the content problem as part of his own account of the semantics of fictional names (Evans 1982, chapter ten). Evan's view is roughly this. When we participate in fictions we are exposed to information in some form or another. It may be the images produced in a film, or the perceptual experience of a known illusion or that reported by the text of a novel. And that information will appear to be information about things. The image projected on the screen in theater appears to be an image of an alien, and the sentences in the novel appear to report information about people. Given this information it is possible for us to behave as if it was veridical. Thus I may gesture at the rock upon which my perceptions suggest there is a diminutive biped and say 'that's an elf'. In Evan's view my doing so makes it fictionally true that 'that' refers to the elf on the rock. What guarantees this is the truth of the following counterfactual: if the perceptual information I was receiving was really caused by an elf on the rock, then 'that' would have referred to him (Evans 1982, 360-365). We may extend this account to the case of names by noting that we make as if to fix (learn) the reference of the name, and thus generate fictional truths that they do refer.

These fictional truths create the genuine serious truths that (16) and the like seem to express when we exploit the make-believe or fictional truths:

any of the games of make-believe we have been discussing can be exploited in the making of serious statements *about* the game, and about what is make-believedly the case within it. One makes such a statement by *making a statement* (i.e. making a move within the game), but in such a way as to manifest the intention that what one does should really be up for assessment as correct or incorrect (i.e. *really* correct or *really* incorrect) according to whether or not *the statement one makes is correct or incorrect*. Thus the speaker says something absolutely true or false by *saying something true* or *saying something false* (Evans 1982, 363-364).

Evans describes the use of names and demonstratives in this way—that is, as if they had a referent—as a conniving use. On the no-theory view however, this use would be merely one more among many. What it would share with the others is the role of contextually provided information in determining what is said. In order to understand the utterance I must bring to bear both my knowledge of the fictional nature of the information on which my understanding of the name is based and the pragmatically provided information that the speaker intends his utterance to be *really* up for assessment as true or false.

In other words, if the Walton/Evans approach to the content problem is right, then on the no-theory theory what ensures that utterances like (16) are meaningful is the context sensitivity of names. I am not in a position to understand what is said by an utterance of (16) unless I know that Emma Woodhouse is not real. Indeed in this case (though perhaps not in all) it seems reasonable to say that I have not mastered the name 'Emma Woodhouse' unless I know this. Given this information however I am in a position to recognize that the contribution made by the name to the utterance in which it occurs is not, as it were, real semantic content, but only make-believe semantic content, and that the actual truth of the utterance depends on the make-believe truth of the proposition that the sentence make-believedly expresses. Its worth noting in this respect that the make-believe content of a fictional name would not be limited to its make-believe referent. If in a (realistic) film the character who is president of the United States uttered (11), the no-theory account would accommodate the fact that the content to be evaluated for make-believe truth would be that of (23).

(11) The U.S. constitution gives me the power to appoint Supreme Court justices.

(23) The U.S. constitution gives the president the power to appoint Supreme Court justices.

2.4.3 Negative existentials

As I mentioned earlier the semantic problem—the problem of how fictional names can contribute semantic content to the utterances in which they occur—is closely associated with the problem of accounting for the meaning of negative existential sentences like (24).

(24) Santa Claus doesn't exist.

How does the no-theory theory account for these sorts of utterances?

First of all, it is worth pointing out that despite the popularity of these sorts of sentences with philosophers they are actually slightly unusual.¹² In ordinary conversation one would be much more likely to utter (24a).

(24a) There is no Santa Claus.

Why does this matter—after all, doesn't the (a) sentence say just the same thing as the original? The right answer to this is yes, it does, but considering the more natural versions of the sentence can give us a better idea of what is being said by means of it. In particular, I think it is no coincidence that (24a) has a form that is also the perfectly natural one to use when claiming that nothing satisfies a definite description, as in (25), or that there are no exemplars of a particular property, as in (26).

(25) There is no present king of France.

(26) There are no orange ravens.

¹² We do occasionally use sentences like (a) and (b).

(a) Santa Claus doesn't really exist.

(b) Emma Woodhouse isn't real.

These seem to be tantamount to saying that Santa Claus and Emma are fictional characters, which lands us in the criticism problem again.

That is, it is a familiar locution for denying that a particular property is instantiated. This suggests that in (24a) the semantic content provided by 'Santa Claus' is not a fictional character or an indication that it is make-believe truth that is to be evaluated, but a description (presumably a characteristic one that is easily recovered by those familiar with the use of the name 'Santa Claus'). This of course is easily accommodated by the no-theory account, since it all ready acknowledges that the semantic content contributed by a name is sometimes a description. Furthermore, this is perfectly compatible with whatever is the correct account of the problems of content and criticism, since the whole point of the no-theory account is that the semantic content of names is context sensitive.

2.4.4 Information and indexes

In my discussion of the contrast between the index of a term and its semantic content I suggested that the index of a proper names was its referent. However, this cannot be quite correct, as the case of fictional names shows. Just as an ordinary name is associated with a referent, a fictional name is associated, by similar non-linguistic convention, with a body of 'information'—whether mythological or literary or fiction of another sort. Mastery of these names will require a certain familiarity with the information in question—just as mastery of ordinary names requires a certain familiarity with the referent. Whether or not that mastery requires knowing that there is no referent depends to some extent on the kind of fiction involved. It is worth remarking that even the sketchiest knowledge of the referent of an ordinary name is enough to allow some use of the name, though perhaps not enough to understand every use of it.

Cases of fiction are not the only ones which suggest that the index of a name is not its referent. Some of the problematic simple sentences also indicate this. It may still be helpful to think of the process of understanding utterances of (12) or (27) as involving the recognition of the indexes of the terms 'Superman' and 'St. Petersburg', but given the possibility of unenlightened use this index cannot be the referent.

(12) Superman is more successful with women than Clark Kent.

(27) I've never been to Leningrad, but I visited St. Petersburg last week.

(Given the context, I remind the reader that for our purposes the Superman story is to be treated as fact.) That is understanding an utterance of (12) does not require that hearer

correctly identify the referent and then (via pragmatic processes) the content. Instead the hearer must correctly identify the practice of sometimes using the term 'Superman' to pick out a particular group of appearances of the individual Clark/Superman. Since all that may unify these appearances is the practice of using 'Superman' to pick them out, it seems more plausible to think that the index is the naming practice. This has the further advantage of being something both enlightened and unenlightened users of the names in question are competent with. Fictional names and ordinary names are thus not really two separate kinds. If an account like that of Walton is correct then fictional names will not be able to be used to express a true object-dependent proposition, but in any case the practice of using the name is just as able to serve as an index as in the case of an ordinary name.

On a treatment of proper names on which it is recognized that the contribution of the name to the semantic content of an utterance is both context sensitive and on occasion can not be specified but only characterized in terms of our practice of using the name, the case of fictional names does not present a discrete problem. Fictional names are neither meaningless nor a different kind of linguistic item than ordinary names. It is the non-linguistic practices and facts that differ.

2.5 Underdetermination

The claim that the linguistic meaning of proper names underdetermines their semantic content is a central component of the no-theory account of proper names. I now want to say a little more about what this underdetermination amounts to. I will begin by discussing Bezuidenhout's analogous claim for descriptions of the form 'the F is G'.

Bezuidenhout suggests that the unitary linguistic meaning for definite descriptions can be analyzed as (Bezuidenhout 1997, 394;397):

[[Feature F is instantiated <uniquely/accessibly> by an *x* which has feature G]].

This incomplete representation needs to be contextually completed. Pragmatic processes will determine whether the proposition expressed is general or object-dependent (Bezuidenhout 1997, 394). There are a couple of points that should be noted. First of all, the proviso that the referent be either the unique F or the accessible F is not necessarily part of the content of the utterance, but instead encode *procedures* for identifying the referent in the context (Bezuidenhout 1997, 397. If the proposition expressed is a general one then additional

features may be added to the description in order to secure uniqueness. Suppose that we witness a riot at a school, and I utter (28).

(28) The principal should call the police.

The accessible principal is the principal of the school at which the riot occurs. Thus, if I am taken to be uttering a general rather than object-dependent proposition, my utterance will have the content of 'the principal of this school should call the police'. Secondly, the existential presupposition is not built into the analysis but the inference to the existence of the F will be made unless there is reason to do otherwise—e.g., if the context is a fictional one or the description is inside the scope of an appropriate modal operator then the inference will be blocked (Bezuidenhout 1997, 394).

Bezuidenhout's analysis is intended to provide an explanation of the wide range of propositions that can be expressed using descriptions without positing any ambiguity at the level of linguistic meaning. The different semantic content arises as a result of the pragmatic processes which operate on the linguistic meaning, and the outcome of these processes is not determined by the linguistic meaning, but merely constrained by it.

The account of proper names that I am advocating has a similar desideratum—an account of the linguistic meaning of names that allows particular uses of them to vary widely in their contribution to the semantic content of the utterances in which they occur. Unlike the case of definite descriptions, however, it is unclear that there is any analysis of the linguistic meaning of names to be had. As Russell observed, descriptions possess a common structure and parts which affect the linguistic meaning of the whole. In the case of proper names however, there is no unifying structure and it seems, no one thing that the competent user of the name must know beyond that the name is used to talk about whatever has that name. This might tempt you to think that names have no linguistic meaning at all, and it is certainly part of the inspiration behind the view that the meaning of a name is exhausted by its referent.

However, while there may be no fact which every user of the name must know, there is an ability which one must possess in order to use a name—*vis-à-vis*, the ability to identify the referent. (I here use the term loosely to cover both the cases where there is an individual which is the referent and the cases where there is only a practice of using the name thus and so.) This need not be the ability to recognize the referent myself. Consider this example from Jackson (1998b). Suppose I read in the newspaper about Smith being robbed in Washington yesterday. I cannot identify Smith by appearance—there is no picture accompanying the

story—and I certainly cannot assume that there was just one person called 'Smith' who was robbed in Washington yesterday. Nevertheless I do know how to identify him in principle (in practice it might be very hard). I know that the Smith I refer to when I report on the robbery to you or a friend is whichever Smith was the causal origin of the report in the newspaper (Jackson 1998b, 7).

Consequently, if the Smith whose report that he was robbed was the causal origin of the story turned out to be committing insurance fraud we would say that Smith wasn't robbed at all, and if the reporter turned out to have fabricated the story we would say that there was no Smith (and here the name would contribute some description to the content of the utterance). Jackson discusses the case where there were several robberies of people named Smith and the reporter mixed them up, so that the story wasn't entirely about any of them. His suggestion is that here we would lose the intuition that I refer at all (Jackson 1998b, 8). My intuition is also that in this case we would simply withdraw the utterance. Thus whether we say the utterance is false or meaningless will be a theoretical choice. My view is that in this case the speaker intends to express an object-dependent proposition about the causally relevant Smith and that when he turns out not to exist she discovers that she has (in some sense) not said anything at all.

Thus my view is roughly that the linguistic function of proper names (meaning being an odd word to use here) is to make the naming practice salient to the process of interpretation,¹³ and competency with a name consists in having some means of identifying the referent.¹⁴ The contribution made to what is said by this particular use of the name—i.e., its semantic content—will then be worked out by pragmatic means. However, as in the case of descriptions this content is merely constrained, not determined, by the naming practice in question. As the Clinton example shows, I may need to know more than this about the

¹³ There is thus some sense in which I agree with the claim that the linguistic meaning of a name NN is 'the thing called NN'. I have avoided this formulation because it suggests that names come with the guarantee or the presupposition that there is some *thing*, in the metaphysically significant sense, that they are names of.

¹⁴ The first use of a name may serve to create this means, as when I utter a sentence like 'My friend Sara has a son' to someone who has never heard of Sara before. My sentence creates the knowledge that Sara could be identified by asking me. While on this point it is worth noticing that the only context in which it is acceptable to introduce a name without either an adjective of some sort or a descriptive phrase is in fiction. I may start a novel with the sentence 'Sara had one son', but should I utter it in conversation with people who were not already familiar with the name my audience would rightly interject with 'Who's Sara?' Presumably this is because the description 'one of the characters in this book' is available to any reader of the novel.

referent (again used in the loose sense) of a name in order to understand a given utterance using the name.

3. *Compositionality*

The quest to identify the contribution of proper names to the semantic content of the utterances in which they appear is partly driven by the goal of giving a compositional semantics for natural language. Compositionality is often explained by means of the truism that the meaning of a sentence is determined by the meanings of its constituent expressions. This is often all those who invoke the principle of compositionality have to say about it. Nevertheless, it is as it stands too vague to be helpful. For our purposes we will need to tighten things up considerably. First of all we need to distinguish between two different readings of 'meaning' in the sentence above. It could, in the first instance, be a claim about the linguistic meaning of an sentence, as in (CLM).

(CLM) The linguistic meaning of a sentence is determined by its syntax and the linguistic meanings of its constituent expressions.

That is, the rule for determining the linguistic meaning of a sentence needs only the linguistic meanings of the parts as inputs. Alternatively, it could be a claim about the semantic content of a given utterance of a sentence, as in (CSC).

(CSC) The semantic content of an utterance is determined by its syntax and the semantic contents of its constituent expressions.

I want to distinguish between (CLM) and (CSC) because I think the failure to do so can lead to implicit reliance on hybrid principles that equivocate on the meaning of 'meaning'. However, these two principles are also truisms—it is certainly the case that the semantic properties of complex expressions depend in some way of the semantic properties of their parts.

The substantive thesis that is often invoked under the name 'compositionality' is the claim that natural language have what we shall call a compositional meaning theory. A language has a compositional meaning theory iff the meaning of its complex expressions are determined, *in a way which could be spelt out by finite means*, by its syntax and the meanings

of its constituent expressions.¹⁵ Here again we must distinguish between a language having a compositional theory of linguistic meaning (CTLM) and a compositional theory of semantic content (CTSC). Notice that in each case the appropriate principle of compositionality could be true for a language which fails to have a compositional meaning theory.

The requirement that a compositional theory of semantic content (linguistic meaning) be finitely expressible combined with the fact that there are potentially infinitely many expressions in a natural language means that such a theory must specify the semantic content (linguistic meaning) of a finite number of basic expressions and rules for generating the semantic content (linguistic meaning) of more complex expressions on the basis of their syntax and the semantic content (linguistic meaning) of the basic expressions out of which they are formed.

3.1 Compositionality and the no-theory view

One consequence of the claim that there is nothing which is *the* content of proper names and that in some instances it will not be possible to state what the contribution of the proper name is to the utterances in which it occurs is that there cannot be a compositional theory of semantic content. The problem is that names (having no meaningful parts) must be accommodated as part of the list of basic expressions. This is a difficulty partly because names can make different contributions to the content of utterances. However, if this was the only barrier it could be handled by treating each name as ambiguous. The more pernicious problem is that sometimes the semantic content of the name cannot be specified at all. That is, for sentences like (6) and (29) we may be unable to point to anything that unifies the circumstances in which they are true (false) other than that the circumstances are ones in which they are true (false).

(6) No ancient astronomers believed that Hesperus is Phosphorus.

(29) Superman kissed Lois before Clark did.

The problem is not that we cannot point to the features that make (29) true in a particular circumstance, but that we cannot give an independent account of what makes something a

¹⁵ This is adapted from Richard (1997, 199). A theory may have infinitely many axioms but still be spelt out by finite means if those axioms are specified recursively.

circumstance in which (29) is true. The problem for (6) is that we cannot give an account of the contribution of the names 'Hesperus' and 'Phosphorus' that specifies what will count as a counterexample but is also compatible with Lydia's knowledge, not ad hoc, and not circular. That is, we cannot give an independent account of what makes (6) false. Sentences like (6) and (29) express what we might call *family resemblance propositions*. What unifies the circumstances in which they are true is, to paraphrase Wittgenstein, a network of overlapping and criss-crossing similarities.

One other way to give the semantic content of the basic expressions would be to specify the linguistic meaning of each of the basic elements and provide rules taking one from the linguistic meaning and the context to the semantic content. One immediate problem with this is that it is difficult to see how one can give a rule to take you from the linguistic meaning of the names to the semantic content when that content is unspecifiable. However this suggestion faces another problem as well.

One of the lessons of Kripke's Paderewski case is that sometimes we cannot specify the context either. The assumption that we can give a rule that maps contexts to contents is based on the simplified view that specifying the context means specifying the speaker, the audience, and perhaps the salient objects. This view is supported by overly simplified views of indexicals on which their content in a given context is whomever (whatever) is the speaker, audience, or salient object with property ϕ . Attention to the actual degree of context dependence, the range of types of propositions expressible by means of singular terms, and the role of extra-linguistic information reveals that this model won't do. Specifying the context in the case of (6) and (29) and similar sentences requires specifying what counts as a scientific (or worse, astronomical) discovery, and when an appearance of the individual Clark/Superman counts as a 'Superman' appearance. What the failures of the accounts which try to specify what the content of (6) and (29) are have shown is that this cannot be done in a non-circular way.

3.2 Should we think that natural languages are compositional?

At least some readers will construe the incompatibility of my 'account' of the semantic content of names with a compositional theory of semantic content as a *reductio* of the no-theory view. Compositionality, it is thought, must be true, and so the no-theory account must be false. In this section I want to consider whether there are any good reasons for thinking that natural languages must have compositional theories of semantic content.

One of the most commonly stated reasons for thinking that compositionality of some sort is true is the claim that this supposition is required in order to explain how it is that we gain the ability to recognize novel sentences. The picture is something like this:

Mastery of a natural language consists in the ability to understand infinitely many sentences of that language. We are able to understand novel sentences because they consist of familiar words put together using familiar constructions. What is novel is the particular combination of words and constructions, not the words and constructions themselves. Explaining our understanding of a natural language must involve explaining the mechanisms by which the meaning of the complex novel expression can be generated on the basis of knowledge of the familiar parts. Since one does not understand an assertive sentence unless one understands its truth-conditions, the mechanisms which generate the meanings of complex expressions must also, for each sentence, serve to specify a condition (or set of conditions), such that the sentence is true iff that condition obtains.¹⁶

On this picture the compositional theory of meaning for a natural language encapsulates what it is that competent speakers of the language implicitly know.

The first question we should ask is: which compositional meaning theory? The first part of this picture concentrates on understanding a complex and novel expression. There is a perfectly good sense of 'understand the meaning' of an expression on which I can understand an utterance like (30) without knowing anything about the context.

(30) You should put the paper in that box while I fill in this form.

I know, for example, that it is an imperative rather than assertive utterance, and that if it was uttered to me the speaker would want me to do something with a paper, though without a context it is unclear whether what is meant is a newspaper or an essay. I also know that if it were uttered to me and the paper in question was easily locatable the next thing to do would be to look for a box, and that box is likely to be further away from the speaker than the form he or she is filling out. In as far as that is the sort of knowledge that a compositional meaning theory is supposed to explain then what is at issue is a compositional theory of linguistic

¹⁶ See, for example, Davidson (1965, 8).

meaning. If this is all that is required then my view offers no difficulty, as I do not deny that there is something like a compositional theory of linguistic meaning, provided it is understood that the linguistic meaning of a name is more like a pointer to the index (which serves as a placeholder)—that is, more like a procedural instruction, though not an effective one—than like a property, a Kaplan style character, or a Fregean sense.

However, the further requirement that the theory of meaning serve to specify truth conditions for assertive sentences makes clear that what is issue is not a compositional theory of linguistic meaning but a compositional theory of semantic content (CTSC), for it is the semantic content of an utterance that is truth-evaluable. On the no-theory account of names there can be no CTSC because there can be no appropriate specification of the semantic content of proper names, either directly or by means of a function from context to content. Of course given that the universe will eventually come to an end we can be sure that there will be some finite description of the relationship between context and content—namely a list of ordered pairs which matches each utterance of a name with content of that utterance.¹⁷ But this description cannot explain our understanding of natural language and is not what is wanted by advocates of the view that natural languages must have a compositional theory of semantic content.

What this makes clear is that the issue is not actually our purported ability to understand infinitely many utterances, but our known ability to understand a finite number of utterances. Given a vocabulary of 200 nouns and 50 transitive verbs in their present tense forms and mastery of only the simple sentence form 'noun phrase transitive verb noun phrase' an English speaker will be able to understand two million sentences (Grandy 1990, 558-559). It may well be thought that a finitely stateable compositional theory of semantic content is required just to explain this ability. The no-theory view of names is committed to the claim that there is no such theory. The question at hand is whether this makes our ability to understand natural languages a mystery.

3.3 Schiffer's counterexample

Schiffer argues that there is no reason to think that natural language understanding requires a compositional semantics by describing a possible language user whose language

¹⁷ Of course, if that content is not independently specifiable the list may not be particularly useful to one who does not already know what the semantic content of each utterance of each name is.

processing ability does not exploit any sort of compositionality (Schiffer 1987, Chapter 7). This language user, Harvey, is an information processor who processes by means of a neural machine language, which we, following Schiffer, shall call M . Harvey's neural construction is such that he has a belief iff he stands in a certain computational relation to a token sentence of M . We may represent this abstractly by saying that the sentence tokens which correspond to Harvey's beliefs are recorded in a belief box B . For each belief that Harvey is capable of having there is a unique sentence of M that would occur in B iff Harvey had that belief. Thus it is reasonable to say that, where α is the sentence of M that would appear in B iff Harvey believed that snow is white, α means that snow is white and that where μ is the part of α that is the inner counterpart of 'snow' μ refers to snow (Schiffer 1987, 193).

Harvey is endowed with various belief forming mechanisms which determine which circumstances will result in a formula α being recorded in B at a given time t . These mechanisms may involve sensory stimulation and/or the presence of other formulas in B at moments prior to t . Corresponding to each formula α will be a complex counterfactual property which details these mechanisms. Schiffer calls this property the formula's *conceptual role*.¹⁸ The task then is to show that Harvey's ability to process utterances in his natural language E_1 does not depend on E_1 having a compositional semantics. E_1 is non-indexical, unambiguous English (Schiffer 1987, 194).

Suppose Carmen utters the sounds 'Some snow is purple'. What must be explained is how Harvey can move from his belief that Carmen uttered these sounds to:

- (a) His belief that Carmen said that some snow is purple, and
- (b) His belief that what Carmen said is true just in case some snow is purple,

and this must be explained without relying on a compositional semantics for E_1 . This is accomplished by stipulating the conceptual roles of certain of the expressions in M (Schiffer 1987, 194-195). In particular, we will stipulate the conceptual roles of 'said that' and 'true'. We assume that there is a function f from E_1 to M such that f is definable by means of the formal features of the expressions alone and that, where δ can be used to say that p , $f(\delta)$ tokens the belief that p . For convenience we shall adopt the assumption that Harvey speaks the same

¹⁸ Schiffer emphasizes that he is not making any theoretical claims about conceptual roles and is not offering them as part of a theory of mental content, as he thinks there can be no such theory (Schiffer 1987, 194).

language as he thinks—i.e., that E_1 is M —I hope it is clear that nothing that follows in any way depends upon this convention.¹⁹ Thus in what follows f is a disquotational function.

We begin with the conceptual role of 'said that'.

If the sentence

$\lceil \alpha \text{ uttered } \delta \rceil$

is in Harvey's B -box and $f(\delta) = \mu$, then, *ceteris paribus*, so is the sentence

$\lceil \alpha \text{ said that } \mu \rceil$

So, since Carmen uttered 'Some snow is purple', the sentence

'Carmen uttered 'sum' ^ 'sno' ^ 'iz' ^ 'pur'pel''

is in B and since $f(\text{'sum' ^ 'sno' ^ 'iz' ^ 'pur'pel'}) = \text{'some snow is purple'}$, then, *ceteris paribus*,

'Carmen said that some snow is purple'

is also in B . The conceptual role of 'said that' guarantees that whenever Carmen utters 'Some snow is purple' Harvey will, providing no overriding conditions obtain, come to believe that she said that some snow is purple (Schiffer 1987, 196-197). The overriding conditions in question will in Schiffer's view consist of various defeater sentences appearing in Harvey's B -box.

We turn now to the conceptual role of 'true'.

¹⁹ Schiffer (1987, 196-198) shows how to do without it.

If the sentence

$\lceil \alpha \text{ said that } \mu \rceil$

is in B , then so is

$\lceil \text{What } \alpha \text{ said (viz., that } \mu) \text{ is true iff } \mu \rceil$

Thus, to continue the example, since

'Carmen said that some snow is purple'

is in B , so is.

'What Carmen said is true iff some snow is purple'

"So much," writes Schiffer, "for Harvey's mastery of his public language E_1 " (Schiffer 1987, 199). The point is that Harvey's ability to move from his belief that Carmen uttered a certain series of sounds to his belief that she said μ depends solely on syntactic features of E_1 and the conceptual roles of some of the expressions of M . It in no way depends on there being a compositional theory of semantic content for either E_1 or M .

3.3.1 Harvey and Indexicality

Harvey's public language E_1 contains no indexicality, and it may be thought that the context sensitivity that underpins the no-theory theory is what paradoxically requires compositionality to be true. The example of Harvey can be extended to cover a language E_2 which includes indexical expressions. This extension does require that we pay some attention to the structure of expressions in M , and thus in E_2 , but this weak compositionality does not carry with it any commitment to a compositional theory of semantic content (Schiffer 1987, 200-201). The difficulty for my view is that Schiffer's extension of the Harvey example to cover indexicality does involve specifying a co-reference relation on singular terms. I will begin by laying out Schiffer's account.

We suppose that M contains a predicate 'Ref(x, y, z)' which should be read as x 's utterance of y refers to z , where z is a singular term in M . The conceptual role of 'Ref' will be a complicated one that takes account of many contextual features of an utterance, including speaker intentions. We then revise the conceptual role of 'says that' as follows. Where α and β_i are singular terms in M and ' $\Sigma(t_1, \dots, t_n)$ ' is a structural description of a sentence in which the indexicals t_1, \dots, t_n occur:

If the sentences

$\lceil \alpha \text{ uttered } \Sigma(t_1, \dots, t_n) \rceil$

and

$\lceil \text{Ref}(\alpha, t_1, \beta_1) \text{ and } \dots \text{ and } \text{Ref}(\alpha, t_n, \beta_n) \rceil$

are in B then, *ceteris paribus*, so is

$\lceil \alpha \text{ said that } \Sigma(\beta_1, \dots, \beta_n) \rceil$

Thus, if

'Ralph uttered 'He is retired''

and

'Ralph's utterance of 'he' refers to Nixon'

are in B , then *ceteris paribus*, so is

'Ralph said that Nixon retired' (Schiffer 1987, 201).

The important questions from my point of view are (a) how sentences including 'Ref' might come to be entered into Harvey's B -box, and (b) what are the status of the singular

terms of M . If both of these can be accounted for without presupposing that the semantic content of singular terms can be specified then Harvey will be just as good a counterexample for me as for Schiffer. I begin with (b).

3.3.2 Harvey and the no-theory view of singular terms

Recall that in Schiffer's counterexample the conceptual role of an expression of M is connected with the mechanisms under which sentences involving that expression get entered into Harvey's B -box. It is important to note that neither this nor the trivial sense in which an expression of M may be said to mean something (or refer to something) requires that M itself have a semantics at all—never mind a compositional semantics. There is an isomorphism between Harvey's internal language M and his public language E_2 , such that for each expression p there is an expression μ such that a sentence of the form 'Harvey believes that p ' is true just in case μ is recorded in Harvey's B -box. Here p is a substitutional quantifier ranging over those expressions of E_2 which can be combined with 'Harvey believes that' so as to form a grammatical expression of E_2 . As a result, it is reasonable to regard the expressions of M as inheriting the semantic properties of the expressions of E_2 with which they are paired.

For example, if there is a singular term α in Harvey's neural language such that whenever $\dots\alpha\dots$ appears in Harvey's B -box then Harvey believes that \dots Superman \dots , then it is reasonable to regard α as, derivatively, possessing the semantic properties of 'Superman' (Schiffer 1987, 190-191; 193). For example, given that the individual Clark/Superman is the referent of 'Superman', we may regard him as the referent of α . The important point to notice is that α inherits its semantic properties from the intentional properties of Harvey's beliefs, rather than vice versa. That is, we are licensed to regard α as having the individual Clark/Superman as its referent—and as having the other semantic properties of 'Superman'—because of the fact that whenever sentences of the form $\dots\alpha\dots$ appear in Harvey's B -box then we *also* judge it to be the case that Harvey believes that \dots Superman \dots . This latter judgement must be made on independent grounds. We should not conclude that the contents of Harvey's beliefs are explained by the meanings of the inner formula.²⁰ A formula of M —say μ —means ϕ derivatively, as a consequence of the fact that whenever it is recorded in Harvey's B -box it is also true that Harvey believes that ϕ .

²⁰ Schiffer's view is that there can be no explication of belief content (Schiffer 1987, 190).

In particular, we have no independent reason to suppose that singular terms in Harvey's *lingua mentis* have any semantic content, and we especially have no reason to suppose that they have specifiable semantic content. Given that a singular term α in M is correlated with a singular term β in E_2 (or a particular token of β), if it has any semantic properties at all the most reasonable assumption is that it has just the same semantic properties as β (or that token of β).

3.3.3 Weak compositionality

What about the question of sentences involving 'Ref' being entered into Harvey's *B*-box? I want to take this in two stages. First of all, I think in the case of proper names and the kind of sensitivity I am suggesting they have this claim is not essential to the counterexample. Harvey must implement the function f which takes utterances in E_2 as input and gives sentences of M as output. This translation function could translate the names of E_2 into singular terms of M on the basis of their syntactic properties before the sort of processing that Schiffer is discussing has occurred at all. The singular terms of M would then have the same context sensitive content as the names of E_2 , but as they only have their content derivatively anyway this is not a worry.

However, sentences of the form ' α 's use of t_i referred to β ' are needed to show that Harvey has the ability to report on what someone has said using appropriately transformed pronouns or names. As an English speaker I am able to echo Nixon's utterance of (31) by using (32) or (33).

(31) I am not a crook.

(32) He is not a crook.

(33) Nixon is not a crook.

A natural way to explain this phenomena would be to say that I know that (in this context) my utterance of (33) has the same semantic content as Nixon's utterance of (31). The problem is to show how an information processor like Harvey could demonstrate this ability without exploiting a compositional semantics. Schiffer's solution is to allow that there is some weak compositionality exploited in language understanding. Harvey's ability to move from his recognition of Ralph's utterance of (32) to the belief that Ralph said that Nixon is not a crook

depends on the conceptual role of 'said that' in M being sensitive to some parts of the structure of E_2 . This is acceptable for his purposes as long as all the predicates of E_2 , however complex, are treated noncompositionally. It might appear, however, that this is a problem for the no-theory view of names, since the element of the utterance to which 'said that' is sensitive is the singular term.

Schiffer does not tell us what the conceptual role of 'x's utterance of y refers to z ' ($\text{Ref}(x, y, z)$) in M is, but he does say that it will be linked with various predicates which ascribe communicative intentions to the utterer (Schiffer 1987, 200). Intuitively, the idea is that as a result of his sensory perceptions and sentences of M already entered in Harvey's belief box, a number of sentences of M that ascribe communicative intentions to a speaker will be also be entered in his belief box. Perhaps these include the mentalese equivalent of 'Carmen intended that gesture to draw my attention to Nixon'. In any case whenever sufficient numbers of these sorts of sentences are recorded in Harvey's belief box, so will $\text{Ref}(\text{Carmen}, \text{'he'}, \text{Nixon})$. The important point to notice is that this process does not require that the singular terms of E_2 or M be assigned any determinate semantic content. That is, Harvey's understanding does not operate by having any sentences of the form 'x means y' recorded in his belief box for once and for all for any singular terms x and y . $\text{Ref}(x, y, z)$ is a relation that holds between utterances of singular terms in E_2 and terms of M .

In some ways Schiffer's use of 'refers' as part of this predicate of M is (for my purposes) unfortunate, since it suggests the naïve view of the content of singular terms. We can see that the use of the word 'refers' to parse $\text{Ref}(x, y, z)$ is merely incidental when we consider how Harvey would come to have 'Carmen said that (23)' recorded in his belief box as a result of hearing Carmen utter (3).

(3) The U.S. constitution gives Clinton the power to appoint Supreme Court justices.

(23) The U.S. constitution gives the president the power to appoint Supreme Court justices.

This would happen just in case $\text{Ref}(\text{Carmen}, \text{'Clinton'}, \text{the president})$ came to be entered in Harvey's belief box. And just like in the case of 'he', what is required for this to happen is that certain mentalese sentences representing Carmen's intentions be recorded in his belief box. The role of $\text{Ref}(x, y, z)$ is to license substitution in a particular instance, not encode any claims about the uniform content of singular terms in E_2 or M .

3.3.4 But what about Lydia?

This is all well and good, but it may seem that the no-theory view of names now faces another problem. I have just said that Harvey can come to have instances of $\text{Ref}(x, y, z)$ recorded in his belief box as a result of his recognition of Carmen's intentions. But the whole point of the example of Lydia and the astronomers was to show that speaker intentions don't fix the content of singular terms. So whatever else Harvey can do, it might seem that he can't understand those kinds of singular terms.

This would be a worry *if* instances of $\text{Ref}(x, y, z)$ were only recorded on the basis of Harvey's recognition of a speakers intentions concerning the singular terms themselves—e.g., the intention that 'Hesperus' mean 'the evening star' and the like—or intentions concerning the content of the utterance as a whole. One of the morals of the Lydia example and the simple sentences was that intentions of this sort either don't fix the right content or can't be plausibly ascribed to the speaker. However Lydia does have all sorts of intentions that do help us determine what she has said—e.g., the intention to report on the history of astronomical discoveries about Venus. It is these intentions, not ones about singular terms, that Harvey recognizes, and it is the mentalese predicates ascribing them that the conceptual role of $\text{Ref}(x, y, z)$ links it with.

This discussion may raise one additional worry about language understanding—the thought that the no-theory view makes our ability to recognize the circumstances in which certain utterances are true a mystery. After all, if (29) does express a family resemblance proposition, so that there is nothing that unifies the situations in which it is true other than that they are ones in which it is true, how is it that I recognize these situations when I encounter them?

(29) Superman kissed Lois before Clark did.

This question is connected with the more general problem of how we recognize whether a family resemblance concept applies or not. Our mastery of family resemblance concepts cannot involve applying necessary and sufficient conditions, as there are none. Nevertheless, Wittgenstein was right in suggesting that we do use such concepts (Wittgenstein 1958, 66-71, 76-79). However this worry is not one raised by the failure of compositionality, and so I shall leave the issue for now and return to it in section 5 of this chapter.

3.3.5 What does Harvey show?

In summary, the example of Harvey shows that it is possible for an information processor to understand a language that has no compositional theory of semantic content. Harvey's processing of his natural language in no way depends on it being possible to spell out by finite means the way in which the meaning of its complex expressions are determined by its syntax and the meanings of its constituent expressions. Of course Harvey is not meant to be a model of how we understand natural languages, as discovering that would be an empirical project (Schiffer 1987, 192).

Harvey thinks in a neural language, and thus embodies the language-of-thought hypothesis. I think Schiffer is right to claim that this is not an essential feature of the example (Schiffer 1987, 205). Indeed some advocates of connectionism have claimed that one of the features which distinguishes their program from the traditional symbol-systems hypothesis is that in connectionist models mental representation is context sensitive and even at the level of syntax only approximately compositional. For example Paul Smolensky writes:

while connectionist networks using distributed representations *do* describe mental states with the type of constituency required by (2a) [thoughts have composite structure—NMW], they do *not* provide an implementation ... of a symbolic language of thought. The context-dependency of the constituents, the interactions that must be accommodated when they are combined, the inability to uniquely and precisely identify constituents, the imperative to take seriously the notion that the representation of *coffee* is a collection of vectors knit together by family resemblance—all these entail that the relation between connectionist constituency and syntactic symbolic constituency is *not* one of implementation (Smolensky 1991, 210).

Smolensky's concern is to articulate some of the differences between connectionism and the language-of-thought hypothesis. However if he is right then on some connectionist models the syntax of the language of thought is not even compositional—i.e., a representation of *cup with coffee* may not be formed out of context independent representations of *cup* and *coffee*.²¹ In other words, on some connectionist models of thought it may be the case that even the item of syntax which is the mental analogue of the word 'coffee' varies from context to context.

²¹ Not everyone agrees that these connectionist models do not employ compositional syntax—see Butler 1995

Information processors do not have to implement a Fodorian language-of-thought in order to do without compositionality.

4. *Central uses and speaker meaning*

I now want to give one last airing to the view that philosophical semantics should be concerned with the central or core uses of language, and that the problem cases I have discussed are examples of peripheral uses, or that the issues they raise are issues for speaker meaning, and thus pragmatics rather than semantics. I hope that the arguments of the previous chapter have convinced the reader that the distinction between pragmatically provided information and semantically provided information cannot be mapped onto the distinction between what is said and what is merely implied. In this section however, I want to consider whether the distinction between central and non-central uses can be sustained in any other way.

The naïve view is the most defensible of the contemporary views discussed in chapter three. Even if we assume that there is some solution to the Lydia puzzle to be had, the other views must either attempt to accommodate the simple sentence counterexamples of chapter four or claim that there is some essential difference between the anti-substitution intuitions involved in belief ascriptions and those operative in these cases. This claim is unsupportable. In contrast the naïve view simply rules that all anti-substitution intuitions concerning singular terms are the result of a mistake. The pragmatic explanation of the origins of these intuitions may appear difficult to give, but since the naïve view takes the position that the intuitions are fundamentally confused in any case, this might be thought no surprise.

Unfortunately a great deal of the plausibility of the Salmon and Soames defense of the naïve view rests on mapping the distinction between what is said and what is merely implied onto the distinction between pragmatically provided information and semantically provided information. If the naïve view is to be maintained another account of the origin of our inability to correctly identify what is literally said by the various puzzle sentences must be found.

4.1 Speaker-meaning

One possibility might be to claim that anti-substitution intuitions concern speaker-meaning rather than expression meaning, but that language users systematically confuse

speaker-meaning with expression meaning. The naïve view, one might claim, offers an account of the expression meaning of sentences containing singular terms. In contrast, our intuitions concern what the speaker means by a given sentence *A*, rather than what *A* means. Now if one takes this approach then speaker-meaning cannot itself serve as a foundation for expression meaning, and thus one cannot rely on the distinction between speaker-meaning and expression meaning that lies at the heart of a Gricean approach to meaning. On that approach an expression gains a meaning—say ϕ —in virtue of it being an expression which by convention is used to speaker-mean ϕ . In order for expression meaning to be sufficiently different from speaker-meaning to support the naïve theory the distinction needs to be drawn in a different way.

Perhaps what is wanted is something like Evans' distinction between what a speaker denotes by a use of a name *NN* and what the name *NN* denotes (Evans 1973, 1). The parallel would thus be a distinction between what a speaker means by an utterance of a sentence and what the sentence means. As in the case of Evans' distinction for names what a speaker means by a sentence would be occasion relative—it would be an account of utterance meaning, whereas what a sentence means would be context independent. However, it becomes immediately clear that this will not do, as the presence of indexicals means that many sentences of English and other natural languages do not have semantic content independently of being uttered in a particular context. Since the naïve theory assigns semantic content to an indexical in a given context it is not merely a theory of context independent—i.e., linguistic—meaning.

The final possibility is that the distinction is supposed to match the ordinary distinction captured by the phrase 'what he said was ..., but what he meant was ...'. However, if this is the distinction then it cannot do the job that the naïve theory needs for the reasons outlined at the end of chapter four and in the last chapter. On the ordinary notion of what is said sentences like (12) and (12*) say different things.

(12) Superman is more successful with women than Clark Kent.

(12*) Superman is more successful with women than Superman.

The point of the naïve theory is to deny that our intuitions about what is said match onto the actual semantic content of the sentences.

4.2 Limning the world

A second possibility might be to claim that, appearances to the contrary, the puzzle cases are all intentional contexts. One might claim that in as far as the sentences in question are read as imparting information about the state of the world rather than information about our psychological reactions to that state of affairs, substitution is permitted.²² Roughly, the suggestion would be that the semantic content of an utterance describes a state of affairs, but that an utterance also implies that people will react to that state of affairs in certain ways. Thus the difference between (7) and (7*) is not a difference in the way they describe the world is being but a difference in how we would expect people to react to that state of affairs.

(7) Clark went to the fancy-dress party as Superman.

(7*) Superman went to the fancy-dress party as Superman.

However, the naïve theorist might continue, it is absurd to think that any claims about the reactions of others are part of what is literally said by (7) or (7*). What causes the confusion is that we are sometimes more interested in the facts about how people will react than we are in facts about the state of the world. To borrow a phrase from Quine, one might thus conclude that in as far as we are engaged in "limning the true and ultimate structure of reality" the naïve view provides all the semantics we need (Quine 1960, 221).

The major difficulty with this view is that it is unclear why we should think that people would react differently to a situation (and not the description of the situation) when it is described by (7) than they do when it is described by (7*) if (7) and (7*) genuinely describe the same situation. It is as if we attempted to maintain that merely uttering (34) rather than (35) could result in someone *who hadn't heard my utterance* reacting differently to the colour of snow.

(34) La neige est blanche.

(35) Snow is white.

²² This line of argument was suggested to me by Philip Catton's comments in conversation that substitution seems to be allowable when we are tracking the world but not when we are tracking ourselves.

The problematic simple sentences cannot be assimilated to the case of attitude ascriptions. In the case of the latter it is not unreasonable to think that there are some descriptions of the state of affairs that affects whether what is uttered seems true or false—namely the descriptions under which the person to whom the attitude is ascribed thinks of the situation.

The defender of this strategy might maintain that the relevant causally active descriptions are not the utterances of (7) or (7*) but the ways of thinking of the situation that we conclude a witness would form as a result of perceiving the state of affairs in question. The difficulty here is it is mysterious why an audience enlightened about the identity would conclude that witnesses would form different mental representations of the situation unless (7) and (7*) actually describe different (albeit importantly similar) situations. Again, it would be peculiar for an audience to reach a similar conclusion about a witness's mental representations of the colour of snow on the basis of my uttering (34) rather than (35). The difference between (7) and (7*) is parallel to the difference between (34) and (36), not that between (34) and (35).

(36) La neige est rouge.

The final difficulty with this strategy is that while it is implausible to claim that utterances of (7) and (7*) literally say anything about how observers would think about the situation, it is not implausible to claim that (6) and (6*) are making claims about how the astronomers think of the situation.

(6) No ancient astronomers believed that Hesperus is Phosphorus.

(6*) No ancient astronomers believed that Hesperus is Hesperus.

Thus this defense, even if was successful, is really another defense of the claim that there is a difference between the simple sentences and propositional attitude ascriptions. The defender of the naïve view would still owe us a explanation of why it the apparent difference between sentences like (6) and (6*) is *merely* apparent.

4.3 Literal and metaphorical uses

Finally, one might try to suggest that the reading on which the paired sentences differ in truth value is not a literal one but a metaphorical one. The reason we cannot seem to

specify the content of (6) and (7) is the same reason as we cannot specify what is said by a metaphor. Consider (37).

(37) She wanted to think of a metaphor so badly she could taste it.

It would be impossible to specify what situations would count as wanting to think of a metaphor this badly. Metaphors just don't seem to work by specifying the circumstances in which they are true.

Obviously there is a great deal that could be said about metaphorical speech and the basis on which we judge a particular utterance to be metaphorical. However the short way to deal with this approach is to point out two obvious difficulties. First of all, the claim that the utterances are metaphorical cannot accommodate the unenlightened utterer of sentences containing co-referential proper names. The unenlightened utterer intends to say something that is literally true, and the unenlightened audience understands the utterance as a literal one. As a consequence the defender of this strategy seems to be saying that the sentences in question are read as metaphorical because the audience judges that the literal meaning cannot be what is meant, but if this is the case the same problem arises as for the conversational implicature approach—in order to make that judgement the audience must know what the literal meaning is. Secondly, since the purported metaphors are so pervasive the naïve theorist owes us an explanation of why they have neither become dead metaphors nor resulted in a bifurcation of meaning for one or more of the words involved.

I can think of no other way in which the distinction needed by the naïve theorist could be defended. However, I have not and cannot argue that such a distinction is not possible. Perhaps some ingenious defender of the naïve view will come up with an account of the distinction between the semantic content and the conversational implications of the puzzle sentences that does explain how we could confuse the two. Accordingly in the last section of this chapter I will raise some questions about why we would want to avoid dealing with the hard cases even if the distinction is defensible. Before doing that I want to address the charge that the no-theory theory of names is merely defeatist.

5. *Things we do with names*

The decision to give up the claim that we can give a precise account of the semantic contributions of proper names is not to be taken lightly. However, it also should not be

regarded with the kind of philosophical dread that it seems to be. After all, why should we think that one unified account should be available? The primary motivation seems to be the belief that in order for us to use language—in particular, in order for us to process novel utterances—there must be a semantic theory which we acquire as implicit knowledge. However the extent to which this is true seems to support only the claim that there are rules which determine the content of an utterance on the basis of the content of its parts. The weak compositionality that was exploited by Schiffer's Harvey example is of this kind. There seems to be no reason to think that language use requires that the semantic content of all the basic terms be specifiable by finite means.

Does this mean, as Schiffer suggests (Schiffer 1987, 270-271), that philosophers of language should shut up the shop and go home? No—the mere fact that natural languages turn out not to be very well behaved is not a reason for despair. It was long thought, for example, that arithmetic must be axiomatizable, but the discovery of its incompleteness by Gödel has not led to wide scale abandonment of arithmetic as somehow less useful. There is no consistent complete axiomatization of the theory to be had, and perhaps we find that aesthetically unpleasing. In a sense semanticists are searching for a similar axiomatization of the theory of meaning for natural languages—get the right principles (compositionality, semantic innocence), the right account of information content, the right division between pragmatics and semantics and, voila, we have recursively specified the truth conditions (meaning, etc) of every expression possible in the language. It turns out that natural languages are simply not well enough behaved for such an account. Perhaps the unfortunate consequence of the expressive power of natural languages is a lack of a single theory of meaning.

Let me press the analogy to arithmetic a little further. The ability to express peculiar family resemblance propositions like (38) is an advantage of natural languages.

(38) Clark kissed Lois before Superman did.

Circumstances in which (29) are true really are similar to each other, and that one of them obtains may be important information for me to have. It will allow me to understand Lois's behaviour, for example. Furthermore, the extra information that he did it while dressed up as Superman at a fancy-dress party, or while wearing his glasses, may not be particularly relevant. However, the ability to express these sorts of propositions comes at a price, just as the ability to go beyond the resources of first-order logic comes at a price. In the case of

arithmetic this price is incompleteness. In the case of natural languages it is the absence of an axiomatizable meaning theory. We should not assume that such a language would be unusable, any more than unaxiomatizable arithmetic is unusable. Nor is this to say that semanticists should close up shop. The inability to give a complete description of something is not the inability to say anything about it at all.

One reason for thinking that the no-theory view is defeatist is that raised earlier—the thought that the no-theory view makes our ability to recognize the circumstances in which certain utterances are true a mystery. How do we recognize whether a family resemblance proposition is true or not? The essence of the problem is to explain what allows us to recognize a given appearance of, for example, the individual Clark/Superman as a 'Superman' appearance. It is, I admit, a genuine difficulty, and I don't really have the slightest idea how to solve it. The point I do want to make however is the difficulty is perfectly general—it is not a puzzle special to the no-theory view of names. The puzzle arises elsewhere in the semantics of natural language in connection with family resemblance terms and also in connection with adjectives, another aspect of natural language that causes difficulties for advocates of compositional theories of semantic content. The problem with adjectives is that practically all of them have noun-dependent conditions of applicability, not just evaluative ones like good. Ran Lahav gives a long series of examples from which these are just a sample:

a red apple ... needs to be only red on the outside, but a red hat needs to be red only on its external upper surface, a red crystal is red both inside and outside, and a red watermelon is red only inside. For a book to be red is for its cover but not necessarily for its inner pages to be red; while for a newspaper to be red is for all of its pages to be red. ... What is square in a square face are the contours of the chin, cheeks and forehead as they appear from the front, while a square house is square when looked at from above, ... A slow animal is one who runs slowly, a slow student one who grasps slowly (Lahav 1989, 264-265)

Furthermore, the fact that for some parings there seem to be no applicability conditions at all—when, for example, does one have a gentle computer?—seems to be merely a matter of lack of interest in and opportunity for assigning them. If, to use one of Lahav's examples, rats regularly changed in appearance, some abruptly and some slowly, we might naturally apply the phrase 'gradual rat' to the slow changers (Lahav 1989, 266).

It does not seem to be possible to capture the applicability conditions in any general account of each adjective. The most prominent attempts serve only to reduce the problem of adjectives like 'red' to other adjectives like 'salient' or 'interesting' (Lahav 1989, 267, 271). Our ability to recognize whether an adjective applies to a novel item is thus mysterious in that it seem to rely on analogies and similarity relationships. To summarize, the no-theory view of names claims that our understanding of some uses of proper names exploits an ability which, despite its mysteriousness, we have independent reason to believe human beings possess.

Singular terms are not the only reoccurring problem for semantics—various paradoxes continue to resurface again and again, recreating themselves in altered forms in face of apparent dissolution. In face of the realization that the only successful strategies for evading the paradoxes limit the expressive power of language, some philosophical logicians have argued that we ought to study the paradoxes, understand how they work, but give up the attempt to get rid of them. Paradox might well be seen as an interesting semantic phenomena in its own right, rather than a mistake to be dissolved.

Perhaps a similar approach could be applied to proper names. We might seek to understand their peculiar behaviour—perhaps even model it—but give up on the attempt to provide one account of all their uses. There may be many things we do with names.

6. *Real life, hard cases, and philosophical semantics*

The advantage of treating names as highly context-sensitive expressions is that it confronts the hard cases of philosophical semantics head on. One should not make the mistake of thinking that the naïve view has an account of the puzzle phenomena. The naïve theorist does not have a complete account of the information imparted by the use of proper names and other singular terms until she gives an account of (a) what the conversational implicatures are and (b) how they arise. Most of my criticisms of this aspect of the naïve view focused on the possibility of giving an account of how the conversational implicatures arise that does not undermine the claim that we confuse them for the literal content of the utterance. However the same problems which motivate the no-theory theory of the semantic content of proper names suggest that the naïve theorist will have similar difficulties when she attempts to give an account of what the conversational implicatures are. This is the implication of Jennifer Saul's example of Lydia and the astronomers—(6) is just as much a puzzle for the naïve theorist as for anyone else.

(6) No ancient astronomers believed that Hesperus is Phosphorus.

It seems likely therefore that a mature naïve view will have to settle for giving a no-theory account of the conversational implicatures. Since both the no-theory view and the naïve view will thus give roughly the same account of the conversational phenomena as a whole, it seems the advantage should go to the view which also accommodates our intuitions about the truth-values of a whole class of utterances.²³

Secondly, we should not think that the naïve view has the advantage when it comes to instances in which co-referential terms can be substituted. My position is not that we can never specify the semantic content of a particular use of a singular term or the circumstances in which an utterance containing a singular term is true. There is nothing wrong in saying that a particular utterance of a singular term has its reference as its semantic content. The mistake is in thinking that the semantic content of a singular term is always specifiable.

The main complaint against the naïve view's treatment of the semantic content of proper names is really its irrelevance. It simply doesn't address the features of utterances that are relevant to our normal practices of communicating—to everyday saying, asking, suggesting, noticing, etc. Furthermore it simply refuses to take seriously the hard cases of philosophical semantics.

The view that proper names and other singular terms are highly context sensitive expressions arises when one does take hard cases and real world use of language seriously. The resulting semantic theory is one for real natural languages used by real people. It may be messy, but it is also relevant.

²³ A similar point is made by Crimmins (1992, 34).

CONCLUDING REMARKS

The question with which I began was a simple one—what semantic contribution is made by a proper name to the semantic content of the utterances in which it occurs. The conclusion that I came to is that the question itself misfires. There is no one semantic contribution made by a proper name. The assumption that names do make a uniform semantic contribution is one shared by all the traditional and contemporary treatments of names. It is thus not surprising that we have not arrived at a satisfactory account.

The central claims defended in this dissertation are threefold. First of all, the problematic behaviour of proper names is not confined to propositional attitude contexts. There are wide array of simple sentences—what would usually be regarded as extensional contexts—in which the semantic contribution made by the name varies widely. In some cases, like that of (1), it seems natural to say that the semantic content contributed by a name is a description or property.

- (1) The constitution of the U.S. gives Clinton the right to appoint supreme court justices.

In this case the name 'Clinton' contributes the content of 'the president' to the proposition expressed by (1). In other similar cases a name might have an object as its content, but not the object that is its referent. This is what is going on when we use (2) to claim that David's car is parked out back.

- (2) David's parked out back.

These sorts of examples are usually not considered by philosophers, perhaps because of the ease with which we can explain what they say by other means. However, as I argued in chapter seven, we should not confuse the claim that (2) means that David's car is parked out back with the claim that what was strictly and literally said by (2) was something else.

Other simple sentences like (3) and (4) exhibit more puzzling behaviour.

(3) Clark kissed Lois before Superman did.

(4) I've never been to Leningrad but I visited St. Petersburg last week.

We have strong intuitions that (3) and (4) say something different than their counterparts (3*) and (4*).

(3*) Superman kissed Lois before Superman did.

(4*) I've never been to St. Petersburg but I visited St. Petersburg last week.

However we encounter serious difficulties when we try to give an account of the semantic content of (3) and (4). In order to get the right truth-conditions the various attempts to accommodate these sentences had to posit the existence of aspects of an individual or object that were more than just ways of thinking about or describing that individual or object. These aspects have to be able to walk, be successful with women, be visited by tourists, etc.

Whatever worries we have about the metaphysical commitments of these accounts, they face a more important objection. On these accounts an utterance of (3) or (4) can only be used to say something about the aspect rather than the individual if the utterer was enlightened about the identity. However, it is clear that an utterance of (3) by an unenlightened speaker would still communicate something different from an utterance of (3*) by that same speaker, as would utterances of (5) and (5*).

(5) Clark went into the phone booth and Superman came out.

(5*) Superman went into the phone booth and Superman came out.

Accounts which depend on the enlightened/unenlightened distinction are thus in no better position than those that claim that a semantic theory need to accommodate the intuitions associated with substitution in propositional attitude contexts but need not accommodate the problematic simple sentences. As I argued in chapter three, such distinctions are not sustainable.

The second central claim defended in this dissertation is that language users can distinguish between what is said by an utterance and what is merely implied. The naïve theory, which wishes to deny this, faces a number of obstacles. One of the main difficulties for

the naïve theory is that much of the support for the view that co-referential names have the same semantic content even in attitude contexts comes from our own judgements about what is said. Naïve theorists point out that I can often make a faithful report of what is believed by someone using a co-referential name even in a case where he doesn't know that the names are co-referential. This what is going on in cases like the Marcus/Barcan example, in which (6), (6*) and (6**) seem to say the same thing even when the subject doesn't know about the relevant identity:

(6) I believe that Ruth Barcan invented the new theory of reference.

(6*) He believes that I invented the new theory of reference.

(6**) He believes that Ruth Marcus invented the new theory of reference.

It seems, argues the naïve theorist, that in each case exactly the same information is reported—that my report is a faithful account of what our unnamed philosopher believes—even if he does not know that Ruth Barcan and Ruth Marcus are one and the same person.

If our intuitions about what is semantically encoded by such utterances are sometimes correct, the naïve theorist needs to provide a means for distinguishing intuitions about content from intuitions about what is merely implied. However, our best candidate for a principled way to make such a decision is the availability principle, which maintains that our intuitions about the distinction should be preserved. All the other candidates either allot too much or too little to the class of pragmatic implicatures.

Finally, I also defend the view that in some cases it is impossible to specify the content of a particular use of proper name by independent means. Sometimes our use of a proper name may not reflect any genuine properties. We may be able to go some way to explaining our use of a name on a given occasion by explaining about the double life of the individual or the noncontiguous appearances of the object or the political origins of the names of the city. However telling this story does not serve to give the content of the name. This phenomena arises in connection with both simple sentences like (3) and propositional attitude contexts.

(3) Clark kissed Lois before Superman did.

Saul's Lydia example exhibits this property. Understanding that there are two names for Venus and that the discovery that they named the same planet was an astronomical one is enough to enable Lydia to utter (7) and communicate that the seasonal-cycle astronomer

would be a counterexample, but it is not enough to allow us to specify the content of her utterance.

(7) No ancient astronomers believed that Hesperus is Phosphorus.

The right way to understand these cases is to recognize that there may be nothing that unifies the circumstances in which (7) (or (3)) is true other than that they are circumstances in which (7) (or (3)) is true. The problem is not that we cannot point to the features that make the utterances true in a particular circumstance, but that we cannot give an independent account of what makes something a circumstance in which (7) (or (3)) is true. Sentences like (7) and (3) express what I have called *family resemblance propositions*. The circumstances in which they are true resemble each other, and this family resemblance is the content of the proposition expressed by them.

It is the claim that sometimes the semantic contribution of a proper name cannot be specified at all that implies that names do not make a uniform semantic contribution to the utterances in which they occur. If the problem was merely that names seemed to contribute different kinds of content on different occasions one might hope that these uses could eventually be unified under a finitely expressible rule. However the fact that sometimes the content is itself not specifiable means that we cannot even offer a finitely expressible disjunctive rule.

Collectively these three claims put to rest the notion that proper names make a uniform contribution to the semantic content of the utterances in which they occur. But this conclusion raises a new question—what is the relationship between the linguistic meaning of proper names and their semantic content? The right answer is that the linguistic meaning of names underdetermines their semantic content. The linguistic meaning of a proper name brings the practice of using that name for a certain individual or in a particular way to mind. Pragmatic processes take us from this linguistic meaning to semantic content. The outcome of these processes is not determined by the linguistic meaning, but merely constrained by it.

The main implication of the no-theory account is that if we wish to better understand names we should not be asking questions about their semantic properties. The more interesting questions turn out to concern the details of the pragmatic processes that take us from meaning to content.

REFERENCES

- Abelard, Peter. 1970. *Dialectica*. Edited by L. M. de Rijk. Wijsgerige teksten en studies 1. 2nd ed. Van Gorcum.
- Austin, J. L. 1962. *How To Do Things With Words*. Oxford: Oxford University Press.
- Bach, K. 1998. A puzzle about belief reports. World Wide Web.
<http://userwww.sfsu.edu/~kbach/puzzle.html>. Accessed May 2, 1998.
- Bach, K. 1994a. Conversational implicature. *Mind & Language* 9: 124-62.
- Bach, K. 1994b. Semantic Slack: What is Said and More. In S. Tzohatzidis, ed., *Foundations of Speech Act Theory*. London: Routledge.
- Bach, K. 1993a. Sometimes a Great Notion: A Critical Notice of Mark Crimmins' *Talk About Beliefs*. *Mind & Language* 8. 431-441.
- Bach, K. 1993b. Meaning, Speech Acts, and Communication. In R. M. Harnish, ed. *Basic Topics in the Philosophy of Language*. Herts, Eng.: Harvester Wheatsheaf.
- Bach, K. 1992. Intentions and Demonstrations. *Analysis* 52. 140-146.
- Bach, K. 1987a. On Communicative Intentions: A Reply to Recanati. *Mind & Language* 2. 141-154.
- Bach, K. 1987b. *Thought and Reference*. Oxford: Oxford University Press.
- Bach, K. 1984. Default Reasoning: Jumping to Conclusions and Knowing When To Think Twice. *Pacific Philosophical Quarterly* 65. 37-58.
- Bach, K. 1982. Semantic Nonspecificity and Mixed Quantifiers. *Linguistics and Philosophy* 4. 593-605.
- Barwise, J. and R. Cooper. 1981. Generalized Quantifiers and Natural Language. *Linguistics and Philosophy* 4. 159-219.
- Bezuidenhout, Anne. 1996. Pragmatics and Singular Reference. *Mind and Language* 11. 133-159
- Blackburn, Simon, ed. 1975. *Meaning reference and necessity : new studies in semantics*. Cambridge: Cambridge University Press.
- Boehner, Philotheus. 1952. *Medieval Logic: an outline of its development from 1250 to c.1400*. Manchester: Manchester University Press.
- Burgess, John. 1998. Quinus ab Omni Naevo Vindicatus. *Meaning and Reference*. Canadian Journal of Philosophy Supplementary Volume 23. Ed. Ali A. Kazmi. Calgary, Canada: University of Calgary Press. 25-65.

- Buridan, Jean. 1985. *Jean Buridan's Logic: The treatise on supposition, The treatise on consequences*. Trans. Peter King. Dordrecht, Holland: D. Reidel Publishing.
- Buridan, Jean. 1982. *John Buridan on self-reference*. Trans. G. E. Hughes. Cambridge: Cambridge University Press.
- Buridan, Jean. 1977. *Sophismata*. Stuttgart: Frommann-Holzboog.
- Buridan, Jean. 1966. *John Buridan: Sophisms on Meaning and Truth*. Trans. T. K. Scott. New York: Meredith Publishing.
- Butler, Keith. 1995. Content, context, and compositionality. *Mind and Language* 10. 3-24.
- Carston, Robyn. 1988. Implicature, Explicature, and Truth-theoretic Semantics. *Mental Representations: The interface between language and reality*. Edited by R. Kempson. Cambridge: Cambridge University Press. 155-181.
- Cresswell, M. J. 1985. *Structured Meanings: The Semantics of Propositional Attitudes*. Cambridge, MA: MIT Press.
- Crimmins, Mark. 1997. Hesperus and Phosphorus: Sense, Pretense, and Reference. Nov 2 1997 draft. World Wide Web. <http://www-personal.umich.edu/~markcrim/HespPhos/HespPhos-html.html> Accessed Feb 3 1998.
- Crimmins, Mark. 1995a. Notional Specificity. *Mind and Language* 10(4). 464-477.
- Crimmins, Mark. 1995b. Quasi-Singular Propositions: the Semantics of Belief Reports. *Aristotelian Society* supplementary volume 69. 195-209.
- Crimmins, Mark. 1993. So-Labeled Neo-Fregeanism. *Philosophical Studies* 69. 265-279.
- Crimmins, Mark. 1992. *Talk About Beliefs*. Cambridge, Mass.: MIT Press.
- Crimmins, Mark and John Perry. 1989. The Prince and the Phone Booth: Reporting Puzzling Beliefs. *The Journal of Philosophy* 86. 685-711.
- Davidson, Donald. 1969. On Saying That. *Words and Objections: Essays on the Work of W. V. Quine*. Edited by D. Davidson and J. Hintikka. Dordrecht: Reidel. 158-174.
- Davidson, Donald. 1965. Theories of meaning and learnable language. Reprinted in *Inquiries into Truth and Interpretation*. Oxford: Oxford University Press, 1984.
- Davis, Steven, ed. 1991. *Pragmatics: A Reader*. Oxford: Oxford University Press.
- Dennett, Daniel. 1987. Beyond Belief. *The Intentional Stance* Cambridge: MIT Press
- Dummett, Micheal. 1981. *Frege: philosophy of language*. 2nd edition. London: Duckworth.
- Evans, Gareth. 1985. *Collected Papers*. Oxford: Oxford University Press.
- Evans, Gareth. 1982. *The Varieties of Reference*. Ed. John McDowell. Oxford: Oxford University Press.
- Evans, Gareth. 1981. Understanding Demonstratives. Reprinted in Evans 1985. 291-321.
- Evans, Gareth. 1973. The causal theory of names. Reprinted in Evans 1985. 1-24.
- Edelberg, Walter. 1995. A Perspectivalist Semantics for the Attitudes. *Nous* 29. 316-342
- Edelberg, Walter. 1992. Intentional Identity and the Attitudes. *Linguistics and Philosophy* 15. 561-596.

- Fitch, G.W. 1997. Singular propositions. *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta, ed. Stanford: The Metaphysics Research Lab, Center for the Study of Language and Information. World Wide Web.
<http://plato.stanford.edu/entries/propositions-singular/> Posted July 19 1997. Revised October 21 1997. Accessed July 12 1999.
- Fodor, J., M. Garrett, E. Walker, and C. Parkes 1980. Against Definition. *Cognition* 8. 263-367.
- Follesdal, Dagfinn. 1975. Quine on Modality. *Words and Objections*. Rev Ed. Edited by Donald Davidson and Jaakko Hintikka,. 1969. Dordrecht: D. Reidel. 175–185.
- Forbes, Graeme. 1999. Enlightened semantics for simple sentences. *Analysis* 59.2. 86-91.
- Forbes, Graeme. 1997. How much substitutivity? *Analysis* 57.2. 109-113.
- Forbes, Graeme. 1993. Reply to Marks. *Philosophical Studies* 69. 281-295.
- Forbes, Graeme. 1990. The Indispensability of Sinn. *The Philosophical Review* 99 (4). 535-563.
- Forbes, Graeme. 1989. *Languages of Possibility*. Oxford: Basil Blackwell.
- Forbes, Graeme. 1987. Indexicals and Intensionality: a Fregean Perspective. *The Philosophical Review* 94(1). 3-31.
- Frege, G. 1980. *Philosophical and Mathematical Correspondence*. Ed: Gabriel, Hermes, Kambartek, Theil and Veraat. Chicago: University of Chicago Press.
- Frege, G. 1892a. On Sinn and Bedeutung. *The Frege Reader*. Ed. Michael Beaney. Oxford: Blackwell, 1997. 151-171.
- Frege, G. 1892b. On Concept and Object. *The Frege Reader*. Ed. Michael Beaney. Oxford: Blackwell, 1997. 181-193.
- Frege, G. 1891a. Function and concept. *The Frege Reader*. Ed. Michael Beaney. Oxford: Blackwell, 1997. 130-148.
- Frege, G. 1891b. Letter to Husserl 24.5.1891. *The Frege Reader*. Ed. Michael Beaney. Oxford: Blackwell, 1997. 149-150.
- Grice, H. P. 1989. *Studies in the Ways of Words*. Cambridge, Mass.: Harvard University Press.
- Grice, H.P. 1978. Further Notes on Logic and Conversation. *Syntax and Semantics*. vol 9. Ed. Peter Cole. New York: Academic Press. 113-127
- Grice, H.P. 1975. Logic and Conversation. *Syntax and Semantics*. vol 3. Eds: Peter Cole and Jerry L. Morgan. New York: Academic Press. 41-58. Reprinted in Martinich 1996. 158-167. References to reprint.
- Grice, H.P. 1961. The causal theory of perception. *Proceedings of the Aristotelian Society*. suppl. vol. 35. 121-152.
- Goldfarb, Warren. 1979. Logic in the twenties: the nature of the quantifier. *The Journal of Symbolic Logic* 44. 351-368.
- Hand, Micheal. 1989. Who plays semantical games? *Philosophical Studies* 56. 251-271.

- Henkin, Leon. 1961. Some remarks on infinitely long formulas. *Infinitistic Methods*. (no editor given) Oxford: Pergamon Press. 167-183.
- Hintikka, Jaakko. 1996. *The Principles of Mathematics Revisited*. Cambridge: Cambridge UP.
- Hintikka, Jaakko. 1992. Different Constructions in Terms of 'Knows'. *Companion to Epistemology*. Ed. R. Dancy and E. Sosa. Oxford: Basil Blackwell. 99-104.
- Hintikka, Jaakko. 1990a. The Languages of Human Thought and the Languages of Artificial Intelligence. *Language, Knowledge and Intentionality. Perspectives on the Philosophy of Jaakko Hintikka*. Edited by Leila Haaparanta, Martin Kusch, and Ilkka Niiniluoto. Acta Philosophica Fennica 49. Helsinki: Philosophical Society of Finland. 307-330.
- Hintikka, Jaakko. 1990b. Paradigms for Language Theory. *Language, Knowledge and Intentionality. Perspectives on the Philosophy of Jaakko Hintikka*. Edited by Leila Haaparanta, Martin Kusch, and Ilkka Niiniluoto. Acta Philosophica Fennica 49. Helsinki: Philosophical Society of Finland. 181-209.
- Hintikka, Jaakko. 1982. Is Alethic Modal Logic Possible?. *Intensional Logic: Theory and Applications*. Edited by Ilkka Niiniluoto and Esa Saarinen. Acta Philosophica Fennica 35. Helsinki: Philosophical Society of Finland. 89-105.
- Hintikka, Jaakko. 1975a. *The Intentions of Intentionality, and Other New Modals for Modality*. Synthese Library 90. Dordrecht, Holland: D. Reidel.
- Hintikka, Jaakko. 1975b. Objects of knowledge and belief. in Hintikka 1975c. 43-58.
- Hintikka, Jaakko. 1973. *Logic, Language-Games and Information*. London: Oxford.
- Hintikka, Jaakko and Jack Kulas. 1985. *Anaphora and Definite Descriptions: Two applications of Game-Theoretical Semantics*. Dordrecht, Holland: D. Reidel Publishing.
- Hintikka, Jaakko and Gabriel Sandu. 1995. The Fallacies of the New Theory of Reference. *Synthese* 104. 245-283.
- Hintikka, Jaakko and Gabriel Sandu. 1991. *On the Methodology of Linguistics*. Oxford: Basil Blackwell.
- Jackson, Frank. 1998a. *From Metaphysics to Ethics*. Oxford: Clarendon Press.
- Jackson, Frank. 1998b. Reference and Description Revisited. Jan 7 1998 draft. World Wide Web. <http://coombs.anu.edu.au/Depts/RSSS/Philosophy/People/Jackson/ref.html> Accessed Nov 12 1998. This is an expanded version of Jackson 1998c.
- Jackson, Frank. 1998c. Reference and Description Revisited. *Philosophical Perspectives* 12. 201-218.
- Kaplan, David. 1978a. Dthat. *Syntax and Semantics* 9. 221-243. Reprinted in Martinich 1996. 292-305. References to reprint.
- Kaplan, David. 1978b. On the logic of demonstratives. *Journal of Philosophical Logic* 8. 81-98.
- Kaplan, David. 1968. Quantifying In. *Synthese*. 19. 178-214. Reprinted in Martinich 1996, 347-368. References to reprint.

- King, Peter. 1985. Introduction: Buridan's Philosophy of Logic. In Buridan 1985. 2-82.
- Klima, Gyula. 1993. Debeo tibi equum: a reconstruction of the theoretical framework of Buridan's treatment of the sophisms. *Sophisms in medieval logic and grammar*. Ed. Stephen Read. Dordrecht-Boston: Kluwer Academic Publishers. 333-347.
- Klima, Gyula. 1990. Approaching Natural Language via Mediaeval Logic. *Zeichen, Denken, Praxis*. Ed. J. Bernard and J. Kelemen. Vienna: Institut für Sozio-Semiotische Studien. 249-267. Reprinted at <http://www.fordham.edu/gsas/phil/klima/NLN.htm>.
References to reprint.
- Knuuttila, Simo. 1993. *Modalities in Medieval Philosophy*. London: Routledge.
- Kripke, S. 1980. *Naming and Necessity*. Cambridge, Mass: Harvard University Press
- Kripke, S. 1979. A puzzle about belief. *Meaning and Use*. A. Margalit, ed. Dordrecht: Reidel. 239-283. Reprinted in Martinich 1996, 382-410. References to reprint.
- Lahav, Ran. 1989. Against compositionality. *Philosophical Studies* 57. 261-279.
- Lewis, David. 1979. Scorekeeping in a Language Game. *The Journal of Philosophical Logic* 8. 339-359.
- Locke, John. 1690. *An Essay Concerning Human Understanding*.
- Ludlow, P., ed. 1997. *Readings in the Philosophy of Language*. Cambridge, Mass: MIT Press
- Martinich, A. P., ed. 1996. *The Philosophy of Language*. 3rd edition. Oxford: Oxford University Press.
- McCord Adams, Marilyn. 1987. *William Ockham*. 2 vols. Notre Dame, Indiana: University of Notre Dame Press.
- McDowell, John. 1998. *Meaning, knowledge and reality*. Cambridge, Mass.: Harvard University Press.
- McDowell, John. 1984. *De re* senses. Reprinted in McDowell 1998. 214-227
- McDowell, John. 1979. Truth-value gaps. Reprinted in McDowell 1998. 199-213.
- McDowell, John. 1977. On the sense and reference of a proper name. Reprinted in McDowell 1998. 171-198.
- Mill, John Stuart. 1872. *System of Logic*. 8th edition. London: Longmans, Green and Co, 1947.
- Moore, Joseph G. 1999. Saving substitutivity in simple sentences. *Analysis* 59.2, 91-105.
- Ockham, William. 1980. *Ockham's Theory of Propositions: Part two of the Summa Logicae*. Trans. Alfred J. Freddoso and Henry Schuurman. Notre Dame: University of Notre Dame Press.
- Ockham, William. 1974a. *Ockham's Theory of Terms: Part one of the Summa Logicae*. Trans. Micheal Loux. Notre Dame: University of Notre Dame Press.
- Ockham, William. 1974b. *Summa Logicae*. Edited by Philotheus Boehner, Gedeon Gal and Stephen F. Brown. In *Guillelmi di Ockham: Opera philosophica*, vol. I. St. Bonaventure, N.Y.: The Franciscan Institute.

- Oppy, Graham. 1992. Why Semantic Innocence? *Australasian Journal of Philosophy* 70 (4). 445-454.
- Parsons, Terence. 1997a. Supposition as Quantification or as Global Quantificational Effect? *Topoi* 16. 41-63.
- Parsons, Terence. 1997b. Missing modes of supposition. *Meaning and Reference*. Canadian Journal of Philosophy Supplementary Volume 23. Ed. Ali A. Kazmi. Calgary, Canada: University of Calgary Press. 1-24.
- Peacocke, Christopher. 1981. Demonstrative thought and psychological explanation. *Synthese* 49. 187-217.
- Peacocke, Christopher. 1975. Proper Names, Reference, and Rigid Designation. In Blackburn 1975. 109-32.
- Perry, John. 1994. Intentionality and Its Puzzles. *A Companion to the Philosophy of Mind*. Blackwell's Companions to Philosophy. Oxford: Blackwell. 386-395
- Perry, John. 1993. *The problem of the essential indexical and other essays*. Oxford: Oxford University Press.
- Perry, John. 1986. Thought Without Representation. *Proceedings of the Aristotelian Society*, Supp. Vol. 60. 137-151.
- Perry, John. 1979. The problem of the essential indexical. Reprinted in Perry 1993. 33-52.
- Perry, John. 1977. Frege on demonstratives. Reprinted in Perry 1993. 3-32
- Pessin, Andrew and Sanford Goldberg, eds. 1996. *The Twin-Earth Chronicles: Twenty years of reflection on Hilary Putnam's 'The Meaning of Meaning'*. New York-London: M. E. Sharpe.
- Predelli, Stefano. 1999. Saul, Salmon, and Superman. *Analysis* 59.2. 113-116.
- Preti, Consuelo. 1992. Opacity, Belief and Analyticity. *Philosophical Studies* 66. 297-454.
- Proudfoot, Diane. 1998. Telling it as it could not be. *University of Canterbury Philosophy Research Papers* 1. 1-43.
- Putnam, Hilary. 1979. Comments [on Kripke 1979]. *Meaning and Use*. A. Margalit, ed. Dordrecht: Reidel.
- Putnam, Hilary. 1975. The Meaning of 'Meaning'. *Language, Mind and Knowledge*. K. Gunderson, ed. Minnesota Studies in the Philosophy of Science vol. VII. 131-93. Reprinted in Pessin and Goldberg 1996, 3-52. References to reprint.
- Putnam, Hilary. 1973. Meaning and Reference. *The Journal of Philosophy*. 70, 699-711.
- Quine, W.V.O. 1980. *From a logical point of view*. 2nd edition. Cambridge: Harvard University Press.
- Quine, W.V.O. 1976. *The Ways of Paradox and Other Essays*. Rev. Ed. Cambridge, Mass.: Harvard UP.
- Quine, W.V.O. 1969. *Ontological Relativity and Other Essays*. New York: Columbia University Press.
- Quine, W.V.O. 1961a. Reply to Professor Marcus. Reprinted in Quine 1976. 177-184.

- Quine, W. V. O. 1961b. Reference and Modality. *Reference and Modality* L. Linsky, ed. Oxford and New York: Oxford University Press. 17-34.
- Quine, W.V.O. 1960. *Word and Object* Cambridge: MIT Press
- Quine, W.V.O. 1956. Quantifiers and Propositional Attitudes. Reprinted in Quine 1976. 185-196.
- Quine, W.V.O. 1953. Three Grades of Modal Involvement Reprinted Quine 1976. 158-176.
- Quine, W.V.O. 1948. On what there is. Reprinted Quine 1980. 1-19.
- Rantala, Veikko. 1982. Impossible Worlds Semantics and Logical Omniscience. *Intensional Logic: Theory and Applications*. Edited by Ilkka Niiniluoto and Esa Saarinen. Acta Philosophica Fennica 35. Helsinki: Philosophical Society of Finland. 106-115.
- Recanati, Francois 1996. Domains of Discourse. *Linguistics and Philosophy* 19. 445-475
- Recanati, F. 1993. *Direct Reference, Meaning and Thought*. Oxford: Blackwell.
- Recanati, F. 1989. The pragmatics of what is said. *Mind and Language*. 4. 295-329. Reprinted in Davis 1991. 97-120. References to reprint.
- Reimer, M. 1995. A Defense of *De Re* Belief Reports. *Mind & Language* 10(4). 446-463
- Richard, Mark. 1993. Sense, Necessity and Belief. *Philosophical Studies* 69. 243-263.
- Richard, Mark. 1990. *Propositional Attitudes: An Essay on Thoughts and How We Ascribe Them*. Cambridge: Cambridge University Press.
- Richard, Mark. 1983. Direct Reference and Ascriptions of Belief. *Journal of Philosophical Logic*. 12. 425-452.
- Russell, Bertrand. 1918. The Philosophy of Logical Atomism. *Logic and Knowledge: essays 1901-1950*. Ed. Robert Marsh. London: Routledge, 1992. 177-281.
- Russell, Bertrand. 1910. Knowledge by Acquaintance and Knowledge by Description. *Proceedings of the Aristotelian Society*. 11 (1910-1911). 108-128. Reprinted in Salmon and Soames 1988. 16-32. References to reprint.
- Russell, Bertrand. 1905. On Denoting. *Logic and Knowledge: essays 1901-1950*. Ed. Robert Marsh. London: Routledge, 1992. 41-56.
- Russell, Bertrand. 1903. *Principles of Mathematics*. second edition. New York: Norton. 1937
- Saarinen, Esa. 1982. Propositional Attitudes are Not Attitudes Towards Propositions. *Intensional Logic: Theory and Applications*. Edited by Ilkka Niiniluoto and Esa Saarinen. Acta Philosophica Fennica 35. Helsinki: Philosophical Society of Finland. 130-162.
- Sadock, Jerrold M. 1978. On Testing for Conversational Implicature. *Syntax and Semantics*. vol 9. Ed. Peter Cole. New York: Academic Press. 281-297.
- Salmon, N. 1986. *Frege's Puzzle*. Cambridge, Mass.: MIT Press.
- Salmon, N. 1989. Illogical Belief. *Philosophical Perspectives* 3. 243-285.
- Salmon, N. and S. Soames. 1988. *Propositions and Attitudes*. Oxford: Oxford University Press.

- Sandu, Gabriel. 1998. IF-logic and truth definition. *Journal of Philosophical Logic* 27. 143-164.
- Saul, Jennifer. 1999a. The Best of Intentions: Ignorance, Idiosyncrasy, and Belief Reporting. *Canadian Journal of Philosophy* 29(1). 29-48.
- Saul, Jennifer. 1999b. The Road to Hell: Intentions and Propositional Attitude Reporting. *Mind and Language* 14 (3). 356-375.
- Saul, Jennifer. 1999c. Substitution, simple sentences, and sex scandals. *Analysis* 59.2. 106-112.
- Saul, Jennifer. 1998. The Pragmatics of Attitude Ascription. *Philosophical Studies* 92. 363-389.
- Saul, Jennifer. 1997a. Substitution and Simple Sentences. *Analysis* 57.2. 102-108.
- Saul, Jennifer. 1997b. Reply to Forbes. *Analysis* 57.2. 114-118.
- Saul, Jennifer. 1992. Still an Attitude Problem. *Linguistics and Philosophy* 16. 423-435.
- Searle, John R. 1975. Indirect Speech Acts. *Syntax and Semantics*. vol 3. Eds: Peter Cole and Jerry L. Morgan. New York: Academic Press. 59-82. Reprinted in Martinich 1996. 168-182. References to reprint.
- Sellars, Wilfrid. 1975. Some Problems About Belief. *Words and Objections*. Rev ed. Ed. Donald Davidson and Jaakko Hintikka. 1969. Dordrecht: D. Reidel. 186-205.
- Schiffer, S. 1992. Belief Ascription. *Journal of Philosophy* 89. 490-521.
- Schiffer, S. 1987a. *Remnants of Meaning*. Cambridge, Mass.: MIT Press.
- Schiffer, S. 1987b. The 'Fido'-Fido Theory of Belief. *Philosophical Perspectives* 1. 455-480.
- Schiffer, S. 1977. Naming and Knowing. *Midwest Studies in Philosophy* 2. 28-41.
- Smith, Quentin. 1994. Marcus, Kripke, and the Origin of the New Theory of Reference. *Proceedings and Addresses of the American Philosophical Association*. 68 (1). 94.
- Smolensky, Paul. 1991. Connectionism, Constituency, and the Language of Thought. *Meaning in Mind: Fodor and his Critics*. Eds. Barry Loewer and Georges Rey. Oxford: Blackwell Publishers. 201-227.
- Smullyan, Arthur. 1947. Review of W. V. Quine 'The problem of interpreting modal logic'. *Journal of Symbolic Logic* 12. 139-141.
- Soames, Scott. 1998. The modal argument: wide scope and rigidified descriptions. *Noûs* 32:1. 1-22.
- Soames, Scott. 1995. Beyond Singular Propositions? *Canadian Journal of Philosophy* 25. 515-550.
- Soames, Scott. 1987a. Direct Reference, Propositional Attitudes and Semantic Content. *Philosophical Topics* 15. 44-87
- Soames, Scott. 1987b. Substitutivity. *On Being and Saying: Essays in Honor of Richard Cartwright*. Ed. J. J. Thomson. Cambridge, MA: MIT Press. 99-132.

- Spade, Paul Vincent. 1988. The logic of the categorical: the medieval theory of ascent and descent. *Meaning and Inference in Medieval Philosophy*. Edited by Norman Kretzmann. Dordrecht-Boston-London: Kluwer Academic Publishers. 187-224.
- Spade Paul Vincent. 1982. The semantics of terms. *The Cambridge History of Later Medieval Philosophy*. Edited by Norman Kretzmann, Anthony Kenny, and Jan Pinborg. Cambridge: Cambridge University Press. 188-196.
- Sperber, Dan and Deirdre Wilson 1986/1995. *Relevance: communication and cognition*. 2nd edition. Oxford: Blackwell Publishers, 1995.
- van Inwagen, Peter. 1983. Fiction and metaphysics. *Philosophy and Literature*. 7(1). 67-77.
- van Inwagen, Peter. 1977. Creatures of fiction. *American Philosophical Quarterly*. 14 (4). 299-308.
- Walton, Kendall L. 1978. Fearing Fictions. *The Journal of Philosophy* 75. 5-27.
- Wettstein, Howard. 1991. *Has semantics rested on a mistake? And other essays*. Stanford, California: Stanford University Press.
- Wilson, Deirdre and Dan Sperber. 1998. Pragmatics and time. *Relevance theory: applications and implications*. Ed. Robyn Carston. Amsterdam: John Benjamins Publishing Co. 1-22.
- Wittgenstein, Ludwig. 1958. *Philosophical Investigations*. 2nd edition. Trans. G. E. M. Anscombe. Oxford: Blackwell Publishers.
- Wyatt, Nicole. 2000. Did Duns Scotus invent possible worlds semantics? *Australasian Journal of Philosophy*. forthcoming.

COMPLETE ANALYTIC TABLE OF CONTENTS

Abstract.....iv

Acknowledgements v

Preface 1

 The no-theory theory 1

 Précis of the chapters..... 3

Chapter 1: Recent history 6

 1.1 Content 8

 1.1.1 Propositions 9

 1.1.1.1 Sentence tokens 10

 1.1.1.2 Sentence types 11

 1.1.2 Structure..... 12

 1.1.2.1 Frege on binding..... 13

 1.1.2.2 Russell on binding 14

 1.1.3 Names and singular terms..... 15

 1.2 Frege and Russell..... 16

 1.2.1 Frege 16

 1.2.1.1 Sense and reference 18

 1.2.1.2 Concept and object 19

 1.2.1.3 Thoughts 21

 1.2.1.4 Names and semantic content 22

 1.2.2 Russell 22

 1.2.2.1 Definite descriptions..... 23

 1.2.2.2 Logically proper names versus ordinary proper names..... 24

 1.2.3 Descriptivism..... 26

 1.3 The critique of descriptivism..... 27

 1.3.1 The modal argument..... 28

 1.3.2 The semantic arguments..... 30

1.3.3 The epistemic arguments	31
1.3.4 The twin-earth argument	31
1.3.5 The error argument	33
1.3.4 The moral.....	33
Chapter 2: The contemporary views.....	35
2.1 Descriptivism reborn	36
2.1.1 Wide-scope descriptivism	36
2.1.2 Rigidified descriptions.....	40
2.1.3 Soames' revised modal argument	40
2.1.3.1 The basic argument against wide-scope descriptivism.....	42
2.1.3.2 The variation.....	44
2.1.3.3 The argument against rigid descriptions.....	45
2.2 The naïve theory	47
2.2.1 Pronouns and iterated substitution.....	47
2.2.2 Pragmatic implicatures	49
2.3 Neo-Fregeanism.....	51
2.4 The hidden-indexical theory	53
2.5 Neo-Fregean HIT.....	56
2.6 The indexical theory of names.....	57
2.6.1 The indexical view.....	60
2.6.2 Thoughts	62
2.6.3 Linguistic modes of presentation versus psychological modes of presentation.....	64
2.6.4 Attitude ascriptions.....	65
2.7 The common ground of contemporary semantics of names.....	66
Chapter 3: The counterexamples	67
3.1 Attitude trouble for everybody	68
3.1.1 The naïve view.....	69
3.1.1.1 Lydia and the naïve view.....	71
3.1.1.2 Dispositions	72
The behaviourist	73
The naïve theorist	74
1.1.3 The failure of the naïve view.....	74
3.1.2 Quasi-singular propositions.....	75

- 3.1.2.1 The two-component picture..... 77
 - 3.1.3 The hidden-indexical view 78
 - 3.1.3.1 Crimmins' account..... 78
 - 3.1.3.2 Lydia and Crimmins' providing conditions 80
 - 3.2 Dressing like Superman..... 82
 - 3.2.1 Forbes and ways of dressing..... 84
 - 3.2.1.1 Modes of self-presentation 86
 - 3.2.2 Moore's reference-shifting account 87
 - 3.2.2.2 The metaphysics of aspects 89
 - 3.2.2.3 Aspects and the indexical view of names..... 90
 - 3.2.3 Speaking to the unenlightened..... 91
 - 3.2.4 The enlightened speaker and the sex-scandal..... 93
 - 3.2.5 Simple sentences and demonstratives..... 95
 - 3.3 Defending the simple sentence counterexamples..... 98
 - 3.3.1 Weak intuitions..... 100
 - 3.3.2 Parallel explanations..... 102
 - 3.4 Scorekeeping 103
- Chapter 4: Game-theoretic semantics and the new theory of reference 105
 - 4.1 Is the new theory of reference based on a fallacy?..... 106
 - 4.1.1 Modality and reference 106
 - 4.1.2 Quantification into modal contexts..... 108
 - 4.1.3 Cross-world identification 109
 - 4.1.3.1 Modes of identification..... 110
 - 4.1.3.2 Metaphysics and individuals 112
 - 4.1.3.3 Branching and lines of identification..... 113
 - 4.1.3.4 Descriptivism..... 114
 - 4.1.4 Why refer directly?..... 115
 - 4.2 Independence friendly logics..... 117
 - 4.2.1 Scope and binding 118
 - 4.2.2 Independence friendly logic 119
 - 4.3 Game-theoretic semantics..... 120
 - 4.3.1 GTS for first-order logic..... 121
 - 4.3.2 GTS and information..... 123
 - 4.3.2.1 When independence matters..... 125

- 4.3.2.2 When independence doesn't matter 127
- 4.4. Natural languages, GTS, and names..... 128
 - 4.4.1 Rules for natural language 128
 - 4.4.2 Names and GTS..... 131
 - 4.4.3 Modal operators..... 132
 - 4.4.4 Names and criteria of identification 133
 - 4.4.4.1 Identification and the rule for names..... 133
 - 4.4.4.2 Names and descriptions 135
 - 4.4.5 GTS and Soames' revised modal argument 136
 - 4.4.6 Modal profile revisited 138
 - 4.4.7 What GTS can't do..... 140
- 4.5 So, is the NTR based on a fallacy?..... 142
 - 4.5.1 *De re* reference 143
 - 4.5.2 Criteria for cross-identification 143
 - 4.5.3 Rigid reference versus rigid designators 144
 - 4.5.4 The metaphysics of individuals 144
 - 4.5.5 Direct reference and the necessity of identity 145
 - 4.5.6 Puzzling Pierre..... 147
- 4.6 Conclusion..... 148
- Chapter 5: Neo-medieval semantics 150
 - 5.1 Signification and supposition 151
 - 5.1.1 Signification 151
 - 5.1.2 Supposition..... 153
 - 5.1.2.1 Material and simple supposition..... 154
 - 5.1.2.2 Personal supposition..... 155
 - 5.1.3 The modes of common personal supposition 156
 - 5.1.3.1 The modes..... 157
 - 5.1.3.2 Global quantificational effect 157
 - 5.2 Ampliation and Appellation 159
 - 5.2.1 Ampliation..... 159
 - 5.2.2 Appellation 160
 - 5.2.2.1 Primary and secondary signification 160
 - 5.2.2.2 Secondary significates and appellation..... 162
 - 5.2.3 Signification formalized 164

5.2.4 Supposition formalized.....	165
5.3 Buridan on intentional contexts.....	166
5.3.1 You know the coins in my purse to be even in number.	166
5.3.2 Appellation and rationes.....	166
5.3.3 The medieval hidden-indexical theory	168
5.3.4 I owe you a horse.....	169
5.3.4.1 The sophism.....	169
5.3.4.2 The role of appellation.....	170
5.3.4.3 How many horses?.....	171
5.3.5 Taming the horse with notation.....	172
5.3.5.1 All the horses.....	173
5.3.5.2 Klima on owing a horse.....	174
5.3.6 The trouble with singular terms.....	175
5.4 Reference and Quantification	176
Chapter 6: Semantics, pragmatics and intuitions	178
6.1 The naïve theory	178
6.1.1 The role of intuition.....	180
6.1.2 Are our intuitions irrelevant?.....	181
6.1.3 Paradigms and fuzzy distinctions.....	181
6.2 What is said versus what is implied.	182
6.2.1 The Gricean view.....	183
6.2.1.1 Conventional implicature	183
6.2.1.2 Conversational implicature.....	185
6.2.2 Relevance Theory.....	187
6.3 Recognizing implicatures	190
6.3.1 Detachability and cancelability	190
6.3.2 The modified Ockham's razor	190
6.3.3 Minimalism.....	192
6.3.3.1 Linguistic direction.....	193
6.3.3.2 Mixed minimalism.....	193
6.3.3.3 Minimal truth-evaluability.....	194
6.3.4 The independence principle.....	196
6.3.5 The availability principle.....	200
6.3.6 Theory and intuitions.....	201

6.3.7 Is the availability hypothesis defensible?	203
6.4 The pragmatics/semantics distinction.....	204
Chapter 7: The new no-theory theory	206
7.1 What do the simple sentences show?	208
7.1.1 Is this just the referential/attributive distinction at work?	210
7.1.2 Linguistic and non-linguistic information	211
7.2 The semantic content of names	212
7.2.1 Index and content.....	213
7.2.2 Unspecifiable content	215
7.2.3 Singular terms.....	217
7.2.4 Fictional contexts.....	219
7.2.4.1 Creatures of fiction	221
7.2.4.2 Make-believe	222
7.2.4.3 Negative existentials.....	225
7.2.4.4 Information and indexes	226
7.2.5 Underdetermination	227
7.3 Compositionality	230
7.3.1 Compositionality and the no-theory view	231
7.3.2 Should we think that natural languages are compositional?.....	232
7.3.3 Schiffer's counterexample	234
7.3.3.1 Harvey and Indexicality.....	237
7.3.3.2 Harvey and the no-theory view of singular terms	239
7.3.3.3 Weak compositionality	240
7.3.3.4 But what about Lydia?.....	242
7.3.3.5 What does Harvey show?	243
7.4 Central uses and speaker-meaning	244
7.4.1 Speaker-meaning	244
7.4.2 Limning the world	246
7.4.3 Literal and metaphorical uses	247
7.5 Things we do with names	248
7.6 Real life, hard cases and philosophical semantics.....	251
Concluding remarks.....	253
References	257
Complete analytic table of contents.....	266